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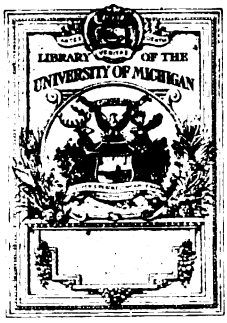


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# THE MEDICAL BRIEF

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# The Medical Brief

A MONTHLY JOURNAL OF PRACTICAL MEDICINE.

Vol. XXXIX. St. Louis, Mo., January, 1911. No. 1.

## EDITORIALS.

### MARY BAKER EDDY.

DE MORTUIS NIL NISI BONUM is a capital maxim, embodying an excellent code of human magnanimity. Yet, as the dying Count Tolstoy grimly declared, "Even in the face of death two and two make four"; and the natural sentiment that gathers around the deathbed of the founder of Christian Science does not really condone her sordid life, or change a single line in the mischief that her pernicious doctrines have wrought. In a rather fulsome editorial upon Mrs. Eddy's death the *St. Louis Star* affectingly remarks:

"Two nights ago a frail little old gentlewoman died who had built an empire, but not of blood or misery. She had shed no blood, destroyed no homes, shackled no nation, but what she had done was to take away a little human misery and substitute a happier, better attitude toward life."

Very touching, to be sure, and greatly to the credit of the chivalrous feelings of the editor of the *Star* towards the "frail little old gentlewoman" in question. But, unlike the sturdy old Russian philosopher, he has allowed the shadow of death to blind his eyes to the harsh facts. It is true that Mrs. Eddy, in her remarkable career, did not, as did Napoleon Bonaparte, with whom the *Star* dramatically contrasts her, lay waste the land with sword and fire. But the stern, unpleasant truth remains, and cannot be mollified even by the pathetic dignity of her death, that her mischievous teachings and her despotic mandates were responsible for the untimely death of many helpless children—and credulous adults—and that a large proportion of the immense fortune which she leaves represents the revenue derived from the promulgation of this heartless propaganda.

A harsh indictment to bring against a "frail little old gentlewoman" now lying in her tomb? Perhaps—but "even in the face of death, two and two make four."

What about the positive side of her alleged mission? Did she, indeed, "take away a little from human misery and substitute a happier, better attitude toward life"? If to have one's sympathies blunted and one's feelings hardened, both for one's own and for others' sorrow and suffering, is to be delivered from misery, then the Christian Scientist is so delivered, just as Dickens' haunted man was freed from unhappiness by the loss of his memory. If a stoicism that is almost pagan in its ultra spiritualism be happiness, then the Christian Scientist has it, of the same quality and degree as the serenity of Omar Khayyam. We are not aware that the "happier, better attitude toward life" attributed to her influence has ever extended beyond the sphere of the Christian Church, Scientist. Its teaching and example do not seem to have ever produced a parable of the good Samaritan or

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of the prodigal son. It is concerned, in short, solely with the happiness of the individual himself, and is not only an anomaly in, but a drag upon, an age of social redemption and regeneration, both physical and spiritual.

That there may be some elements of good in the Christian Science propaganda —some grains of wheat among the chaff—we will not deny. But thus far we are bound to express the opinion that the mischief which has been wrought has greatly outweighed the good; and honesty compels us, even in the face of death, to assert that Mrs. Eddy herself has been the most powerful factor in perpetuating and emphasizing the cheap dupery of the system, and in hindering the development of whatever in it might be genuine and helpful. For this reason, while we naturally regret the demise of the "frail little old gentlewoman," albeit she was full of years and ripe for gathering to her fathers, we cannot help rejoicing that a million or so of misguided people have been delivered, by Mrs. Eddy's death, from the dominant spirit of fanaticism which during her lifetime held them enthralled. Whatever may be the future of the church she founded, we cannot but feel that, freed from the fetish of her personal magnetism, reason will again bcome throned in the minds of her followers, and the absurdities and extravagances of Christian Science, at least, will not long survive its founder.

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## THE USE OF THE RED CROSS SYMBOL.

WE are of the opinion that the American Red Cross Society is overreaching itself in its anxiety to restrict the use of the red cross symbol. It is, of course, in bad taste that the insignium should be used for purposes of commercial advertising; although we do not believe that even this should have been made a subject of legislation, any more than we approve of legislative prohibition of a similar use of the national flag. Both are matters of sentiment, and might well be left to the regulation of public opinion, the Red Cross Society, in this case, using its influence in every legitimate, persuasive way, to discourage such desecration of the symbol.

But to extend even a sentimental objection, and by persuasive means, to the use of the red cross by those organizations and agencies which are engaged in the relief of, or ministry to, suffering humanity—by hospitals, ambulances, and the like—is, in our humble opinion, an exceedingly foolish attitude for the Red Cross Society to take. As well might the Church undertake to monopolize the symbol of the cross itself. The essential significance of the red cross insignium is that it symbolizes the *communism* of human sickness and suffering, and stands for their common claim upon the consideration of mankind. It was adopted by the Geneva Convention, not as a label for an organization, nor even to indicate the specific purposes of the convention, but to serve as the badge and guidon of physical ministry to physical suffering, just as the cross itself (of which it is a modification) is the emblem of spiritual ministry,—so that, wherever the red cross raised its compelling ensign, there the cause of the sick and their helpers should have the right of way,—that human suffering and its ministry might, among all peoples, under all circumstances, amid all conditions, have a common representation, to command recognition and respect.

In this spirit, and with this signification, the world received the red cross symbol, and gave it currency. Its portent and influence have outstripped all conventions and societies, which now derive their significance from it, not it from them. It has become as universal as the sign of the cross. It is as futile as it

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is foolish to try to call it in, and make it the trade-mark of an organization, even though that organization be a branch of the original Red Cross Society. It belongs to humanity: and as long as physical suffering shall last, the world will acknowledge and justify the use of the red cross by every individual, every organization, every movement, every agency, whose object is the ministry of pain and sickness—of which class the doctor and the hospital form by far the largest and most active element.

We realize, of course, that the animus of the Red Cross Society's crusade is a laudable desire to protect the red cross symbol from fraudulent misuse and abuse. It is, unfortunately, a deplorable fact that the insignium is every now and then utilized by schemers and grafters to dupe the public through an implied appeal to its sentiment. It is even possible that it may occasionally be employed to give to intrinsically worthy movements a false color of alliance with the Red Cross Society. All of which should, of course, be severely discountenanced, and punished when discovered. But such abuses are common to all religious and philanthropic institutions, not excepting the church itself—(we have heard of impostors assuming the garb of nuns to fraudulently solicit money)—and need cause no serious alarm. As perviously hinted, they may, in the main, be safely left to public sentiment to regulate. So far as we know, there is no law relating to the defacement of the United States flag; yet we, for one, should not care to invite the results of spitting upon it in a public place. In a less strenuous, perhaps, but no less effectual fashion, will public sentiment take care of the dignity and sacredness of the red cross. Its communism is not only its birthright, but its best protection.

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## THE REVIVAL OF INTRA-VENOUS MEDICATION.

AT various periods in the history of medicine there have been sporadic attempts to bring into vogue the intra-venous mode of medication. But three considerations have always prevented its general adoption, and finally led to its abandonment, namely, the risks attending the technique of the method; the untoward effects which frequently followed the introduction of medicinal substances into the blood-stream; and the uncertainty concerning the chemico-physiologic fate of the substances thus introduced. All of these considerations have helped to discredit the intravenous route, until, in the face of a growing recognition that such risks did exist and such uncertainties threaten, offset by no corresponding definite knowledge by which the risks might be avoided or the uncertainties changed into certainties, the practice was—no doubt very wisely—temporarily abandoned.

It is interesting to note that there now seems to be a disposition among therapeutists to revive the method in the case of certain appropriate kinds of medication, and modified, of course, by modern scientific knowledge and technique. In this we are but following the course pursued by modern medical science toward several former theories and practices, which were abandoned in the progress of exact medicine as being too risky, or too uncertain, or opposed to our new concepts of disease and treatment, but which, with the advent of still further knowledge and more recent concepts, have been revived and utilized in a definite, rational, and effective fashion.

Certainly in the present day not one of the considerations above cited is any longer valid against intravenous medication. Asepsis and surgical skill have made

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of the technique of such injection matter for a June holiday in the hands of the most unsophisticated practitioner, and have reduced operative risk to a vanishing point. The science of hematology has made us familiar with the susceptibilities and capacities of the blood. And a fuller knowledge of the physiological chemistry of metabolism enables us to follow, with reasonable accuracy, the life-cycle of almost every known medicinal substance in its course through the *viae naturae.*

Let us elaborate a little. In the matter of technique, it is a simple proceeding to open a superficial vein: and Nature makes an equally simple job of repairing the slight puncture needed to inject a few cubic centimeters of fluid. Modern mechanics have put into our hands an almost perfect syringe with which to make the puncture with the minimum of laceration, and to inject the fluid without the introduction of air. In the present state of our knowledge about asepsis, and our facilities for carrying it out, the most moderate care will preclude the possibility of infection. The whole procedure is easy, quick, all but painless, and free from risk. Certainly, technique can no longer stand in the way of intravenous medication.

As to the effect of the foreign substance in the blood-stream, in the light of modern knowledge the matter is almost as simple, at least in its end aspects. While the science of hematology has been, and is yet, somewhat of an intricate one, its results, so far as they have gone, are clean-cut enough. While there is still a large field of unexplored ground, yet there is a fairly extensive group of medicinal substances that have been definitely and plainly labeled in regard to their hemolytic properties, and so long as we confine ourselves to this group we run no risk of upsetting the hematic balance.

And, finally, in respect of the chemico-physiologic disposition of the drugs which we inject, our knowledge, although equally limited, is equally clean-cut so far as it goes, and enables us to pick our way with reasonable assurance. All of the substances which we are of late proposing to introduce by the intravenous route have been given by mouth from time immemorial. So that the only new question in physiological chemistry that the intravenous method raises is whether, by skipping the digestive tract and the portal system, these substances lose any good qualities or acquire any evil ones. Our knowledge of this gastro-hepatic circuit assures us that, with the possible exception of certain mild acido-alkaline reactions, there is nothing in its chemistry or physiology to influence drug action one way or the other: and of course no one is going to put hurtful acids directly into the blood. Indeed, so far as this particular consideration is concerned, anything that can legitimately be introduced by the hypodermic method, or by rectal enema, can with equal impunity be given intravenously.

It seems clear, then, that the old objections to intravenous medication no longer hold any water. Neither practitioner nor patient need hesitate to employ, or to submit to, the method on these scores. The only real question to consider is whether the intravenous route has any positive advantages over the *prima via;* and if so, in what instances. We do not advocate—no one, we think, advocates—the adoption of the intravenous method for all, or even for the great proportion of, medication. As stated, the revival of the mode is subject to the modification and discrimination of modern science. But, as a general proposition, it may be said that there is always a marked advantage in introducing medication as directly, as promptly, and as economically as possible to the tissue or organ which it is destined to influence. Hence the medicines to which this mode of administration is most adapted are those which are intended to act directly upon the blood itself.

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A notable example of this class of medication is the Ehrlich-Hata preparation for syphilis, whose essential therapeutic action is the supersterilization of the blood. Nuclein, as will be seen from an article appearing in our original pages this month, is being injected into the veins with a view of increasing the profileration of red corpuscles. And we understand that there is still another preparation in course of experimentation, having a similar therapeutic action. Perhaps all of these remedies, and others of their class, *could* be given by mouth; but not with the same degree of accuracy or effectiveness. For them the intravenous route is, par excellence, the mode of administration. And, as we have pointed out, the reluctance of the physician or the patient to avail himself of this method is both foolish and groundless, a relic of conditions which have long since passed away.

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## THE DOCTOR AS NURSE.

A SHORT time ago we published in these pages an abstract of an article by one Dr. Denny, of Brookline, Mass., calling attention to the importance of nursing in therapeutics, pointing out the necessity of the physician having personal experience in nursing in order to prescribe intelligently for the care of the patient, and urging the incorporation of a course on nursing into the curriculum of the medical student. We do not care to argue here the pros and cons of a special course in nursing in medical colleges, concerning which much could doubtless be said on both sides. But we heartily endorse Dr. Denny's central contention that a working knowledge of nursing is of inestimable—if not of indispensable—value to the practitioner of medicine, and that there is altogether too much disposition in the modern medical school to belittle this phase of practice—in fact, to rather despise it as being beneath the dignity of the physician and surgeon. We are further of opinion that, even though a special course in nursing were impracticable in the medical student's curriculum, yet a great deal of practical instruction could be instilled into him, and personal experience furnished him, in an incidental way, which would be invaluable to him in his after career.

Our interest in the matter, however, is chiefly as it concerns the physician who is already in practice. Whatever may be the attitude of the college professor and the medical student toward the subject of nursing, the practising physician—and especially the general practitioner in the smaller centers—very quickly realizes that not only must he have a working knowledge of the gentle art of nursing, but he must oftentimes himself perform the double function of doctor and nurse. In the practice of the average physician the services of a trained nurse are the exception rather than the rule—an occasional necessity rather than an habitual luxury, to be obtained only under the stress of a rare emergency. Ordinarily the nursing of the patient has to be done by the members of the patient's family: and this always means that the doctor must take charge of the sick room, furnishing detailed directions for the amateur nurses, and performing the greater part of the work with his own hands.

The writer well remembers his own awkwardness in his first practice, which was, as is so often the case, a country practice. A great deal, to be sure, is acquired in the course of individual experience, and the family practitioner usually develops considerable aptitude in this direction. But the highest kind of efficiency is represented by the net sum of general experience, as communicated from one to another. The doctor who would command confidence and achieve

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success in his work cannot be too ready in these little matters of the sick room, which form so important a part in the successful outcome of every serious illness.

It is for these reasons that we have felt the subject to be worthy of a special department in this journal. Under the heading of "The Sick Room" we endeavor to furnish our readers, from month to month, with useful, practical hints and suggestion for the care of the patient, not from the strictly medical point of view, but from the standpoint of the attendant upon the requirements and comforts of the sick person, and of the adviser and guardian of the family in all matters that pertain to the preservation and restoration of health. So far as we are aware, the MEDICAL BRIEF is the only medical journal in the country that devotes a special department to this phase of the physician's work and needs: and we have good reason to believe that it is highly appreciated by our readers. While we do not regard it as the most important section of the journal, yet we consider it a most useful and practical contribution to the doctor's efficiency, and it will be our pride to make it as wide in scope and as helpful in character as care and diligence can compass.

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## Before the Operation

BEHOLD me waiting—waiting for the knife.
A little while, and at a leap I storm
The thick, sweet mysteries of chloroform,
The drunken dark, the little death-in-life.
The gods are good to me; I have no wife,
No innocent child, to think of as I near
The fateful minute; nothing all-too-dear
Unmans me for my bout of passive strife.
Yet am I tremulous and a trifle sick;
And, face to face with chance, I shrink a little;
My hopes are strong, my will is something weak.
Here comes the basket? Thank you. I am ready.
But, gentlemen my porters, life is brittle—
You carry Caesar and his fortunes—steady!

—*Henley.*

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# What Counts.

DID you tackle the trouble that came your way
With a resolute heart and cheerful,
Or hide your face from the light of day
With a craven heart, and fearful?
Oh, a trouble's a ton or a trouble's an ounce,
Or a trouble is what you make it;
And it isn't the fact that you're hurt that counts,
But only, how did you take it?

You're beaten to earth. Well, well, what's that?
Come up with a smiling face.
It's nothing against you to fall down flat,
But to lie there—that's disgrace.
The harder you're thrown, why, the higher you bounce;
Be proud of your blackened eye.
It isn't the fact that you're licked that counts,
It's how did you fight, and why?

And though you be done to death, what then?
If you battled the best you could,
If you played your part in the world of men,
Why, the Critic will call it good.
Death comes with a crawl or comes with a pounce,
And whether he's slow or spry,
It isn't the fact that you're dead that counts,
But only, how did you die?

—Edmund Vance Cook

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# Intravenous Injection of Nuclein for Tuberculosis*

By Edgar P. Ward, M. D., St. Louis, Mo.

DR. WARD'S proposed treatment for tuberculosis approaches the doctrine of body defense from rather a novel angle. He has found that in the tuberculous subject the blood shows a marked diminution in the percentage of hemoglobin, and in the number of red corpuscles, and an alteration in the character of the latter. It is clear that the red corpuscles are the essential cellular element of the blood; hence Dr. Ward concludes that if the proliferation of healthy red cells can be stimulated, the body defenses will be proportionately augmented. Now it is well known that the rapidity of the hemopoietic process may be hastened or retarded by the greater or less amount of free nuclein in the blood, or similar agent; therefore Dr. Ward argues that the intravenous introduction of free nuclein should solve an important therapeutic problem. The details of his theory, the technique of its carrying out, and the practical results obtained from it, are all to be learned from this article, which is most interesting and significant.

At the meeting of this Society at Quincy, Illinois, last year, I read a paper upon the foregoing subject, and later the same was published in the *New York Medical Record*. In order that an intelligent understanding of the subject may be had by those who are not familiar with the previous paper, it will be necessary to go over the salient points thereof.

We are all more or less familiar with the cellular development of the body, and in a general and subconscious way, we are aware that the various tissues of the body are made up of a vast number of these cells. There has been but very little attention paid to the structure of the individual cell, and to what is required to make a perfectly healthy tissue. Likewise, but little attention has been paid to the cellular elements of the various fluids of the body. All the fluids of the body—and in speaking of fluids, I want to lay special stress upon the blood—are composed of, grossly speaking, certain chemical elements and distinctive cells; each fluid contains its own peculiar and distinct cellular element, and it is upon this cellular element that we are dependent for each of these fluids to carry out its elective work; the fluid is the medium by which these cells are able to reach the various tissues of the body, and thus carry to completion their full physiological function.

Now, the blood is one, if not the most important of the fluids of the body, and is composed, according to our physiologists, in one thousand parts, of 784 parts of water and 216 parts of solid; the greater portion of the solids is composed of corpuscles, and the analysis of 1,000 parts of moist corpuscles shows water 688 parts, and solids, organic, 303.88, minerals 8.12. Of the solids, the most important is the hemoglobin, which constitutes more than 90 per cent. of the organic parts of the corpuscles. Now, this being true, there can be no question but that the red blood cells are the most important cellular element of the blood.

I have found in the tuberculous subject, in addition to the presence of the tubercular bacilli and the general clinical symptoms that are familiar to us all, a marked change in the blood, a

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change that may be recognized by any one, and does not require any unusual laboratory equipment. The normal specific gravity of the blood varies between 1.055 and 1.060. In every case of tuberculosis that I have examined in the past several years, I have found a decrease in the specific gravity of the blood, with a corresponding decrease in the amount of hemoblogin. With a decrease in the amount of hemoglobin and in the specific gravity, upon making a count, we find that we also have a decrease in the number of erythrocytes. Not only do we find this decrease in numbers of the red blood cells, but we find that a large per cent. of them have become poikilocytes or deformed cells, and unable to carry on their work.

In the process of the development of the erythrocytes from the normoblasts of the red-bone marrow, the rapidity of the extrusion of the nuclei may be hastened or retarded by the amount of free nuclein in the blood (or if not nuclein, then some unknown agent of like character) diminishing as the amount increases and vice versa. If the amount of free nuclein in the blood is increased by the intravenous infusion of the nuclein solution, a problem of vast therapeutic importance is solved. This, of course, is as yet only theoretical. Yet, as a practical result, we do see exactly these results obtained, so whether or not the theory is a good one, we have the demonstration complete, in that its effects are just what is needed in the secondary anemias, even if not in the primary ones. In the use of the nuclein solution, intravenously, I begin with twenty drop doses, and increase it as rapidly as circumstances warrant, increasing the dose up to sixty drops every second or third day, always regulating the dose by the results obtained upon the red-blood cells.

**We Must Stimulate Cell Activity.**

For several years I have taken the position that if we desire to remove or overcome a pathological condition, we must cease our futile attempts to neutralize the pathological condition by administering given medicaments, and expect by this process of neutralization to "kill off" further pathological growth. We must apply and use such agents as will stimulate and rapidly increase the number of the normal cells of the tissues of the body. If we have enough cells possessing full vitality, we need not worry about the pathological condition, for that will soon be neutralized and cast off by the action of the anti-bodies or anti-toxine, call it what you may, produced by the cells themselves is far superior for its purposes than any similar substances that human ingenuity has thus far been able to devise. A pathological condition cannot exist in the presence of cells which are full of vital energy, for, as stated, they are essentially antitoxic to the pathological process.

**Technique.**

In the technique of intravenous infusion surgical cleanliness must reign supreme. Too much care cannot be exercised to have the parts thoroughly aseptic. Scrub the parts carefully with some good antiseptic soap, and wash off with alcohol. Apply an alcohol pad over the parts until ready to make the injection. I use an ordinary infusion bottle, with six feet of rubber tubing, about one-quarter of an inch in diameter, and a No. 18 or 20 saline solution needle. The needle should be sharp, and with not too long a cutting edge. Keep the needle in alcohol when not in use.

The bottle and tube should be sterilized before placing the solution in it. Allow one ounce of the solution for the bottle and one ounce for each twenty pounds of the weight of the patient. Now, place the infusion bottle, tube and needle, all attached, into a water bath and allow the same to reach the boiling point. This will give a temperature of the infusion at about 110 degrees F. Then place the amount of nuclein solu-

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tion to be used in the bottle and thoroughly mix it with the salt solution by agitation. Apply an elastic ligature about six inches above the elbow. This should be drawn tight enough to swell the vein. I use an ordinary rubber band about one-quarter of an inch. wide. When the vein has become prominent, remove the pad, and spray the surface with chloride of ethyl. This insures practically a painless operation. Introduce the needle at an angle of 45 degrees, first passing it through the skin and then into the lumen of the vein. If the needle is passed freely into the vein, there will be no trouble with the flow, which must be slow and continuous. Place the infusion bottles at a height of the patient's head, when he is in a sitting position. About twenty minutes are required to introduce six ounces in this manner.

When the solution is nearly exhausted, shut off the flow and remove the needle by gently withdrawing it, at the same time using gentle pressure with gauze over the point of puncture. Having removed the needle, secure the gauze with adhesive strips, which may be removed in a few hours.

I use the median cephalic or median basilic vein. If care is used, a larger number of injections may be given in either vein in a very short space. I have given as high as sixty injections in one vein, all the time operating within a space of one inch, without harming the vein whatever. The dose of nuclein must be regulated by the results that are obtained upon the blood.

**Results Obtained in the Nuclein Treatment.**

In eighty-six cases that I have complete records of, extending over a period of three years, I have, by this method of treatment, obtained the following results: sixty cases have improved to such an extent that I am unable to find the tubercle bacilli in the scanty sputum; the specific gravity of the blood has too been brought up to or near the normal; the number of the erythrocytes has increased to near the normal number.

This improvement has persisted from six months to nearly two years in some cases, and after all treatment has ceased. Fifteen are in practically the same state that they were after taking the treatment; for a while some slight improvement, but not sufficient to expect any lasting results. About all that can be said for them is that the nuclein has, at least, retarded the progress of the disease. Eleven have died, the treatment having failed to even retard the disease. All these cases are the average run of cases seen in practice; many of them were beyond hope when I first saw them.

*Read before the Tri-State Medical Society, September 14th, 1910, at St. Louis, Mo.



A gaunt and kilted Scotchman made his appearance in a country village and was endeavoring to charm the locals to charity with selections on his bagpipe. A shaggy-haired man opened the front door of a house and beckoned to the minstrel.

"Gie us a wee bit lilt just oot here," he said, in an accent which told that he also was from the land of the haggis "My auld mither's in a creetical condeetion opstair. The doctor's wi' her the noo, and says the pipes may save her life."

Up and down in front of the house marched the braw Hielander, discoursing music that might well have been incidental to a cat and dog fight. Presently the shaggy-haired man came out again.

"Gie us the 'Dead March,' noo," he said.

"Is the puir auld lady gone?" questioned the piper.

"Na, na, mon; ye've saved mither," came the reply; "but ye've killed the puir doctor."

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# When to Operate.

BENJAMIN B. KIMMEL,
Professor of Surgical Anatomy in the Cleveland Homeopathic College.

IT IS a well-recognized truth that surgical judgment is required to be exercised in deciding the question of when to operate and when not to operate, as in the selection and performance of the operation itself. Indeed, the former problem is often one of greater nicety and discrimination. The author is of the opinion that a great many lives are unnecessarily sacrificed, and healthy careers foregone, by refusing operation, either from a hyper-cautious attitude on the part of the surgeon or from fear of the surgical table on the part of the patient. He thinks that, in these days, when risk and pain have been so greatly reduced by anesthesia, asepsis, and surgical technique, the dread of the knife is in the great majority of cases entirely ungrounded, and that this view of the matter should be more frequently and emphatically urged upon the patient to whom an operation offers the prospect of improvement and cure. He illustrates his point with several cases drawn from his own experience and practice.

In this day of voluminous medical literature, it is exceedingly difficult to say anything new. In fact, men are rare who are able to say anything new. There is little that is even worth repeating. However, there are some subjects of sufficient importance that it probably would not give offense to a sense of literary propriety to emphasize a few points, even at the risk of repetition.

In the high state of perfection of surgical science, it would seem that there ought to be a greater unanimity of opinion on the question of when to operate; but such is not the case. As a general rule, men who are in the practice of surgery are considered, from their views on this question, as the radicals, while those men whose practice is with the remedy case rather than with the scalpel, compose the class called the conservatives. Medical literature is replete with the accusations made by the former class that the latter allow their patients unnecessary suffering and death, because of an unwholesome fear or dread of the operating table; while the latter are continually pointing to the unfortunate cases of surgery and are decrying the so-called tendency to rush cases to the operating table. While, perhaps, both classes are capable of going to an unreasonable extreme, we are of the opinion that the so-called radicals are nearer right than the conservatives.

### Groundless Dread of Surgery.

It will be our aim in this paper to call attention to some of the reasons why we believe that there is an unwholesome dread of surgical treatment.

Medical men do not need to be reminded of the enormous reduction in risk and pain incurred by surgery, owing to the development of the present-day surgical methods. These include, of course, anaethesia, asepsis and antisepsis and also surgical technique. To be sure, a surgical operation is not an experience that any one would accept as a matter of choice, but we believe that with the present-day methods, much of the objection to surgical procedure is entirely ungrounded. We are willing to grant that the so-called conservatives are conscientious in their anti-surgical views, but we are as fully convinced that the

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acceptance of their views has resulted in untold suffering which might have been prevented, and that many useful lives have been taken from the world, which might otherwise have been saved. We can, perhaps, best bring out the points we desire to make, by using some cases which have come within our experience, to illustrate.

**Pelvic Inflammation.**

*Case I.*—In July, 1906, I was first called to see Mrs. B., 37 years old, for uncontrollable haematemesis. She had, as a girl, had considerable dysmenorrhoea. This condition had increased up to the time of her marriage, which was eight years ago, at which time, added to the dysmenorrhoea, was a vicarious gastric hemorrhage. Vomiting usually began after the menstrual flow had ceased. After vomiting two or three days, the gastric hemorrhage began and there would be from eight to ten days of continuous vomiting of blood, after which vomiting would cease and the patient would begin to take nourishment, only to be checked in her career of recuperation by the oncoming of another menstrual period. In this manner she was kept an invalid practically for ten years. At the time we were called in the case, she was so reduced in strength and flesh that it was plain that death would soon take place. An operation was suggested as the only thing possible, to which the patient readily submitted, as she said herself that she did not believe she could live through one more attack. Consequently, on September 17, 1906, she was operated upon. The uterus was in good condition and position, but the appendages showed the ravaging effect of serious inflammation. Adhesions were so numerous that it was almost impossible to remove them. The patient's strength was such that it was deemed inadvisable to do anything more than remove the appendages. The patient made good recovery from the operation and left the hospital in four weeks. There was no return of the vomiting for six months, during which time much progress had been made toward the restoration of health. At the end of six months vomiting recurred, coming at the regular time that the menstrual period would be due. This continued for about ten days, after which the patient began to improve until about a month later, when another attack of vicarious haematemesis ensued. This was so severe that the patient almost succumbed. The only think left worth considering was the removal of the uterus, the last of the generative organs to give rise to the rythmical disturbance which we believe was the cause of the gastric disturbance. This operation was timed in the hope of anticipating a recurrence of the vomiting, but unfortunately, she began to vomit on the morning of the operation. The uterus was removed but the vomiting continued until her sufferings were relieved by death ten days later. It seems plain that the gastric disturbance which, in this case, produced ten years of untold sufferings and finally death, must have been the result of a vicious nervous disturbance arising from pelvic irritation. We believe that this might have been entirely averted had the uterine appendages, at least, been removed at the beginning of her trouble, before the nervous disturbance had occurred. The menopause might have thus been artificially produced and we can see no reason for supposing that the gastric trouble would have followed.

**Appendicitis.**

*Case II.*—This case and the following are illustrative of that most common disease, appendicitis, treated respectively by conservative and radical means. F. V., ten years old, was stricken with appendicitis in May, 1907. The disease was properly diagnosed, but as the indications were that the case would terminate favorably, no operation was advised.

After a few days' treatment the attack subsided. The parents were advised of the probability of subsequent

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attacks, but owing to that almost universal dread of an operation, the advice was not accepted. On June 22 we were again called and found the patient in the agonies of a most serious attack of recurrent appendicitis. Pulse was rapid, 130 to 140, temperature 103, vomiting had been characteristic and the pain was almost unendurable. We saw the case at 9 o'clock in the morning, advised that nothing but an operation had any prospect of saving life. The case was taken to the hospital at 11 o'clock. At 2 in the afternoon the operation was performed and in the 16 or 18 hours that the case had been in progress, the appendix was almost gangrenous. The cavity of the appendix was filled with pus and there was probably a half-pint of free pus in the peritoneal cavity. The appendix was removed, the abdominal cavity drained and the case made an uneventful recovery.

**Gas in Appendix.**

*Case III.*—J. J., 20 years of age, had had considerable digestive disturbance for a period of one year or more. At times there was considerable fever, thick coated tongue, some vomiting, loss of appetite for a period of several days, usually with very little pain. At other times there were attacks of colic without fever, but accompanied by gastric disturbance and sometimes vomiting. An examination of the abdomen disclosed nothing except slight tenderness over the appendix. An operation was advised, but before submitting the case was examined by two other surgeons, who concurred in the view of the writer, consequently an operation was performed June 25, 1907. Upon inspection of the appendix in situ, absolutely nothing abnormal was discernible, with the exception that the diameter was considerably greater in the distal than in its proximal part. Upon removal and examination it was found that the appendix seemed simply constricted at the root. Its constriction hardly appeared to be the result of the inflammatory process. The mucous membrane was in symmetrical rugae similar to that lining the cervical canal. The explanation of this seemed to be that the abnormally small opening from the lumen of the appendix in the caecum had caused an accumulation of gas in the appendix, which ballooned it out and thus accounted for the excessive mucous membrane development. This was believed to be the reflex cause of the digestive disturbance and pain. The abdomen was closed without drainage and the patient went home on the ninth day, and was around town on the fourteenth day. The health of the patient apparently became perfect, and at this time there had been no recurrence of any of the old symptoms. These two cases illustrate the difference between the two treatments. In the one the operation was performed at a time when it was done safely, easily and with almost no inconvenience or pain to the patient. The other was performed at a time when all the elements of risk were the highest. It was also fraught with the usual pain and suffering that is inseparable from four weeks of a suppurating abdominal wound. This might have been averted had an operation been consented to at the close of the first attack, as had been done in case number three.

**Cystic Ovary.**

*Case IV.*—Miss M. M., 16 years of age, on November 14, 1903, was operated upon for appendicitis. The operation was not during an acute attack and the results appeared to be good. For several months after the operation the patient was in a good state of health. At the end of that time, however, she began to fail and complained of pain and great tenderness located in the right ovarian region. She was kept in a state of invalidism during which time various methods of treatment were resorted to, including medicinal, electrical, vibratory, hydropathic, thermic, etc. An operation was advised within, perhaps, a year of the operation for appendicitis, but having gone through one operation the pa-

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tient was not in a frame of mind to easily submit to a second one. However, the advice was constantly kept before the patient, and finally at the end of three and one-half years, she was driven by her sufferings to seek relief, even though it must be at the expense of another dreaded operation. An operation was performed on July 27, 1907. There was no evidence of pelvic inflammation, the uterus was in good position and there were no adhesions. The left ovary and the tube appeared to be normal, but the right ovary was in a state of cystic degeneration, being about three times the size of a normal ovary. This was removed, together with the tube and the abdomen closed without drainage. The patient made an uneventful recovery and the soreness and pain are no longer present. The general health is becoming improved to an extent beyond anything that she had experienced since the time of the operation for appendicitis. Had this patient submitted to the operation two years before, even though it was following close on the heels of a former operation, she might have had two years start in life and thus have been saved much suffering and inconvenience.

These case histories are quoted not so much as argument as they are illustrative of the point in question.

**Diseased Organs Dangerous.**

We hear conservatives urge that organs should be cured, not removed. This would be the method par excellence, if the disease were a thing that could be plucked out, leaving its seat as it was before. But how well do we know that an organ once the seat of serious disease never again comes to possess its original power of resistance. Besides, the delicate nervous balance which we call health is seriously disturbed when an important organ is the seat of disease. To be sure, surgery does not always consist in removing a diseased organ; but it does aim to rapidly and radically separate disease products from the human organism. Tares should be cut off or plucked out. Who would advise that the wheat should be coaxed to choke them out?

All cases may be placed in one of two classes—surgical or non-surgical. Most cases may, without difference of opinion be placed in one or the other class. But there will be certain cases near the border-line which would be claimed alike by the conservative and the radical.

Just how to decide in a given case is, sometimes, a difficult question. There are no fixed rules by which to determine, otherwise there would be no dispute When an efficient operator and adequate facilities are available the dangers of surgery are, of course, minimized. These being at hand, an operation should be advised.

1. When there is danger of sudden exacerbation which would place the case in the "high percentage fatal" class.

2. When the damage to a removable organ is irreparable and its presence threatens a profound systemic disturbance by sympathetic affection.

3. When disease products can be removed quickly, thoroughly and safely.

4. When a simple, operable case is in danger of becoming a dangerous, unoperable one.

5. When nature's cure will be with loss of important function which could be avoided with surgical means.

6. When time could be saved by the surgical method, granting that either might cure.

To conclude, we believe that more good surgery would mean less suffering in the world. If this be true, it is sufficient justification for so-called radicalism in surgery.

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## The Monthly Brief.

*Further carrying out the spirit of this journal, as indicated in its name, with a view of raising it to a high plane of usefulness, we intend printing each month a short pithy article, from the pen of some experienced and authoritative man, setting fourth some cogent, practical lesson in the subject of which the writer is an expert exponent, for the use of the general practitioner. This is the fifth of the series, which will be known as "The Monthly Brief."*

# Non-Surgical Treatment of Cancer.

By Charles Ott, A. M., M. D.,
Professor of Dermatology and Clinical Medicine, Kansas City Hahnemannian Medical College.

IT is to be regretted that in the teaching in medical colleges and in the work of the general practitioner the Escharotic method has been overlooked or unjustly discarded, and its use has therefore been chiefly confined to the so-called cancer specialists of the advertising type, who have used this means to their advantage and have drawn away from the regular practitioner many cases that should have been treated by him.

There are many so-called cancer pastes and plasters in use, every specialist claiming to have one that is best of all and refusing to divulge the composition. The fact, however, is that among all of them there is comparatively little difference. The writer's experience has been confined chiefly to a paste that is very simple, efficient and has this advantage—that it will not attack healthy tissue. It is composed of equal parts of pulverized sanguinaria, hydrastis and chloride of zinc, with sufficient water to make a paste, and before applying he adds usually about 2% of orthoform as a local anæsthesia. This when applied will rapidly destroy infiltrated tissue, turning it white, and when it reaches the limit of that, separation will take place and the devitalized tissue will finally drop away. It will follow the various extensions of the growth in whatever direction it may be found, provided the plaster applied is large enough.

There is in all cases some little technique that needs to be understood in order to have the best results in the shortest time. If there is no opening in the skin or if the growth is covered by apparently healthy tissue, I usually resort to a method which will shorten the process. I paint the skin with pure carbolic acid, naturalizing that with alcohol, covering the surface with a strong saturated solution of potassium hydrate, that is permitted to remain until the pain becomes severe, when it is neutralized with dilute acetic acid and the way for the other plaster is clear. If, however, the cancerous growth is large the rational way is to remove the visible growth in a surgical way and then follow by the application of the plaster for a short time to remove the infiltrated tissue that may have been left.

In epitheliomata of medium depth it will take only a few days to have devitalization complete, but as soon as detachment begins there is an accumulation of puslike fluid which, being unable to escape, will cause pain to the patient. I have often removed the devitalized tissue by slicing it off wherever it can be done, thus relieving the pressure and suffering.

This treatment is especially adapted to epitheliomata or skin cancers of all kinds. In order to maintain the patient's strength I usually apply it for about two to six hours a day, arranging it so that the patient will get a good night's rest; if too painful, morphine or some other anodyne may be given.

The after treatment is very simple, being practically none other than that of common wounds and the methods so well known to surgeons.

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# CURRENT MEDICAL LITERATURE.

## DIAGNOSIS OF MENINGITIS.

LADD, in the *Cleveland Medical Journal,* gives it as his opinion that lumbar puncture offers us the most satisfactory means of arriving at a correct diagnosis in the shortest space of time, and should be promptly done when there is the slightest suspicion of an existing meningitis. The presence of the meningococcus in the spinal fluid calls for the prompt use of Flexner's serum in dull doses on successive days until the spinal fluid clears and the toxemia and physical signs of meningitis have disappeared. In the event of chronic hydrocephalus developing in this type of meningitis, aspiration of the ventricles should be performed and serum injected in place of the fluid removed, as advocated by Dr. Harvey Cushing. Influenza bacilli can be isolated and grown from the spinal fluid when it is the etiological agent, and one case seen at the City Hospital, in which this organism was present and the spinal fluid extremely purulent, progressed to a complete recovery following daily administration of normal horse serum intraspinally.

Pneumococci, streptococci, staphlococci, typhoid bacilli, colon bacilli, bacillus pyocyaneus, leptothrix, and streptothrix forms all have been isolated as etiologic agents of acute cerebro-spinal meningitis. In six cases of streptococcus meningitis resulting from extension of middle ear disease, the use of antistreptococcic serum gave results which were not at all encouraging. Tubercle bacilli, if properly looked for in cases of tuberculous meningitis, can be found in the spinal fluid in 90 per cent. or more of the cases. In one case of tuberculous meningitis seen with Dr. John Phillips five hours after the first symptoms of cerebral irritation developed, lumbar puncture was performed and tubercle bacilli found in the spinal fluid. A plural effusion had been removed from this patient two weeks previous to the development of meningitis and had not recurred.

In examining the spinal fluid for tubercle bacilli, it is best to withdraw the fluid in two tubes. One of these can be used immediately for cytological examination. The other should be set aside for eighteen to twenty-four hours until the fibrinous strands have completely formed. Take a long and stiff platinum loop, gently detach the fibrin from the sides and bottom of the tube, and delicately scrape the bottom of the tube; now have a clean slide ready and remove most of the watery elements from the loop by gently touching the loop to the surface of the glass slide at one end, and then with a gentle rotary motion over an area the size of a three-cent piece transfer the fibrinous clot from the loop to the slide; fix, stain, and examine microscopically, using a mechanical stage for searching, and one can find tubercle bacilli in the same fluid which did not give positive results when the centrifuge was used.

## URINARY COLOR INFECTIONS.

Porter and Deischner, in *Archives of Pediatrics,* urge that great attention be paid to cleanliness of the genitals. It is said that in boys with phimosis circumcision may cause the bacilluria to disappear completely without further treatment. Removal of oxyurides from the bowel likewise often relieves the bacilluria. If the attack is acute the child should be put to bed and be given large quantities of fluid to flush the bladder, at the same time the bowels should be thoroughly moved. In addition to that, 15 grains of urotropin should be given daily. This should be diluted in a large

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quantity of water. The use of the alkalies has been recommended, especially by Morse, who, unlike the writers, finds them more effective than urotropin. But, in the more intense, persistent cases autogenous vaccines give us our only hope. The method of using the vaccines will, of course, depend on the experience and judgment of the individual practitioner. Leary *(Boston Medical and Surgical Journal, 1909)* claims his best results to have followed small doses of the vaccine at short intervals. Thomas, of Philadelphia, in a late number of the *Journal of the American Medical Association,* reports a series of cases in which good results have followed enormous doses at three and four-day intervals. The latter is certainly the least distressing method to the patient. In most of the cases reported that have been given vaccines, this method has been employed, and it has seemed rational to inject the largest dose that can be given without producing a marked reaction and to repeat the injection at four-day intervals.

In the chronic cases of infection, those that show only malnutrition and incontinence with or without a slight temperature rise, the patients should be similarly treated, although they need not be confined to bed. They should be encouraged to drink freely of water and to rest content with a bland, nourishing diet. All methods that tend to improve the general condition should be employed. Anticolon serum used by Dudgeon and others has not been successful.

In concluding, special attention should be called to the importance of culturing the urine in all cases of persistent fever of obscure origin, because this simple procedure will often clear up the diagnosis of a puzzling case.



## ACUTE HEADACHES OF CHILDREN.

LeGrand Kerr, in *Archives of Diagnosis,* asserts that in practically every instance the acute headaches of children are associated with an elevation of temperature. The first thing that must be done is to determine to just what extent the headache is due to that particular rise of temperature and this is decided by two factors, viz., the intensity of the fever and the character of the headache.

Given a temperature under 103 deg. F., headache is rarely present in children unless there is disease of the brain or the meninges. Under such circumstances it is likely to be more or less persistent and intense. When entirely due to a rise in the temperature, headache is usually greatly relieved by pressure over the temples, by the application of cold to the head, and by massage of the veins of the neck. On the other hand, active motion causes an increase in the pain. It is true of all febrile conditions in children that they are usually associated with some degree of headache.

It is not uncommon to find that the scalp of a child is the site of one or more circumscribed areas of inflammation and the tissue in the immediate vicinity, and occasionally for a considerable distance from the foci, is very tender, and pressure gives the child pain. Such conditions are readily mistaken for headache. Then again, more rarely, rheumatism exhibits most of its manifestations for a time in pain in the aponeurosis of the scalp and the child complains as of headache. Palpation easily discloses the true nature of both of these conditions.

The headaches due to toxemia are almost always characterized by pain which is referred to the course of a nerve and is unilateral. If such a headache occurs in a child who is already the victim of some kidney lesion, it should at once excite our suspicion of uremia, regardless of the presence or absence of a rise in temperature. Of course, the large majority of this type of headache is due to an acute toxemia, dependent often upon constipation or overfeeding, and is relieved at once by active catharsis. The acute headache which accompanies the onset of many of the infectious dis-

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eases is readily differentiated because the other symptoms of disease are usually more or less prominent and clearly indicate the etiology of the accompanying headache. The headache of tuberculous meningitis is usually continuous and severe, bearing absolutely no relation to the temperature, which is usually low. Generally speaking, the greater the disproportion between the intensity of an acute headache and the height of the temperature, the more indicative it is of meningitis. This holds true particularly in the tuberculous form of meningitis because it is the more common variety and exhibits a rather low temperature range. In purulent meningitis the temperature runs high and the symptoms are so rapid in their onset and progression that we are not left long in doubt as to the cause of the trouble. The same may be said of the epidemic form. In simple meningitis and in influenza meningitis the temperature is always higher than in the tuberculous form, and the headache is intense usually within the first twenty-four hours.

The diagnosis of the acute headaches which are dependent upon some disease of the organs of special sense is generally easy if the usual locations of such acute headaches are recalled. While not absolutely a rule, nevertheless the location of headache is strongly indicative of its cause.

Acute headaches in the frontal region in children are usually due to autointoxication, ocular overstrain, disease of the nasopharynx, and less commonly to syphilitic nodes or to foreign bodies (in the nasopharynx). Less frequently anemia may cause such a headache. Headaches showing most of their intensity in the vertex are usually due to anemia. The headache of meningitis is referred to the same locality.

Occipital headache is dependent mostly upon middle-ear disease or to spinal caries in the cervical region. Some epileptics exhibit similar headaches. Although often referred to this region the headache of meningitis does not show its characteristic intensity in this location.



## THE BLOOD IN CARDIAC DISEASE.

*The Therapeutic Gazette* remarks that it not infrequently happens that patients present themselves suffering from ruptured compensation, which has developed in the course of valvular disease, who also suffer from a very considerable degree of anemia which may be overlooked unless the physician is one who is careful to make routine examinations of all portions of the body when a case presents itself for study. Even when a considerable degree of anemia is discovered it sometimes happens that the physician fails to appreciate its importance as an etiological factor in the case. A moment's thought makes the fact evident that the administration of cardiac stimulants to anemic patients, however advantageous their administration may be in other instances, will be followed by little improvement unless the state of the blood is bettered. Most of the drugs which act as valuable remedies in cases of ruptured compensation do good not only by regulating the cardiac mechanism, but also by increasing the nutrition of the heart muscle by an improvement in its circulation, and if the patient is anemic the heart muscle is supplied by a fluid from which it is difficult for the heart to obtain the required quantities of oxygen and nutriment. Most of the acute infectious diseases produce a very considerable degree of secondary anemia, and this is particularly true of rheumatism, which, in turn, is the most frequent cause of valvular lesions. The deduction is, therefore, that these patients not only need digitalis, or strophanthus, and rest, but that they also need a course of iron and arsenic with sunshine and as much fresh air as their condition permits. Attention to this collateral condition of anemia is often followed by an improvement which cannot be otherwise obtained.

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### HYOSCYAMUS.

A. J. Crance writes of this drug and its uses in the *National Eclectic Quarterly*. He thinks all will concede that its action is through the cerebro-spinal centers, upon which it has a marked influence compatible with dosage and personal idiosyncrasy. Physiologically, it resembles somewhat several drugs, notably opium, belladonna and stramonium, inducing, as with the latter two, a flushing of the capillaries, dryness of the throat, dilated pupils, together with a stimulant action upon the intestines, but differs in its analgesic and hypnotic powers over them. With opium it compares favorably in somniferous and cerebral effects, differing, however, in not interrupting the secretions, and possessing opposite pupillary action. Its hypnotic intensity is not equal to opium, neither is it applicable to the same conditions, but qualifies where excitation is present rather than somnolence and dull apathy. In pediatry it far surpasses opium, owing to the susceptibility and notorious baneful influence opiates have over children.

Assuming that causes extrinsic, incident to our age of fast living, mental worry, anxiety, over-ambition; and intrinsic, to abuse of our internal mechanism, through excesses and faulty observations or care of nature's physiological laws, are a growing and prolific cause of organic and sympathetic functional nervous diseases, it follows that whatever treatment which will relax and subdue nervous tension and impulses becomes a boon to humanity. In this respect we would class hyoscyamus, performing a role in drug therapy that is difficult to equal from any other source. In its application it is not the remedy for that nervous state dependent upon a congestive feature of capillary stasis of the cerebral centers; but where hyperemia and busy delirium are present, the cerebral anemia which it occasions is the desideratum sought to induce quietude and sleep; it is, therefore, a sedative to the nervous system under conditions of exalted action from its central mass, besides an analgesic to its terminal nerve fibers. In its uses therapeutically it is not resorted to with the frequency it deserves, and few agents of the hypnotic class can equal hyoscyamus for the calmative and nerve-soothing influence which it possesses, together with its remarkable freedom from deleterious after-effects. It obtains special control over nerve excitation through the great sympathetic, therefore is applicable in many neurotic diseases for which it most frequently is used.

To name the diseases over which hyoscyamus is curatively exhibited would be experimental therapeutics; but to classify conditions expresses its usefulness in a positive way, of which the most direct prominent symptomatology are those cases showing a morbid and exaggerated nervous excitation and unrest, with mental perturbation of fanciful or imaginative ideas, a morbid vigilance, a spasmodic impulse or an excessive sensitiveness from a hyperemic state. With qualifications in meeting a train of symptoms as enumerated, it can be readily appreciated that its medicinal usages may be extensively employed. In the fact that nervous elements predominate with many of our patients, and unless we assume control of this all-important condition our auxiliary treatment for associated pathologic states will be fruitless.

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### ADULT CHRONIC DIARRHOEA.

Wm. L. Heeve, in the *National Eclectic Quarterly*, gives the following remedies for this condition, with their respective indications:

Sulphuric acid: Tongue coated brownish or thick, dark coating upon the dorsum, with pointed tip and edges deeply injected.

Hydrochloric acid: Red tongue, dry, pointed tip, with pointed papillæ, and mucous membranes deeply injected. If

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anemia is present, alternating with tr. iron chloride will enhance its action.

Bismuth subnitrate: Given in large doses, where there is great irritation and large, watery stools. Bismuth subgallate may be added with success. Bismuth is never of service in the weak, emaciated condition, with excessive lack of tone.

Opium: Painful tormina and much-increased peristalsis.

Coto: An admirable tonic astringent to mucous membranes, where we have jelly-like, frequent evacuations. It may be combined with other indicated remedies to great advantage.

Silver nitrate: Intense tormina with tenesmus; evacuations tinged with blood or mixed with a pinkish fluid. In the acute exacerbations of old chronic conditions, combined with opium for a few doses, then continue the silver alone, will often terminate the condition more rapidly.

Epilobium: Dry skin, feculent evacuations, contracted abdomen, loose, watery movement; long-continued diarrhoea following typhoid or colitis; diarrhoea following abstinence in beer and ale drinkers.

Geranium: Constant desire to go to stool, with small amount of mucus passing; may be given diluted with water as a high enema; in prostitis and sigmoiditis without ulceration.

Ipecac: A strong decoction is my favorite in dysentery-like evacuations.

Hydrastis: As a mucous tonic it is always serviceable, but of little use in atrophic catarrhal conditions.

Nux vomica: Morning diarrhoea in the neurotic patient or the active mover in society, the midnight dissipator; in atonic diarrhoea.

Mangifera: An ideal tonic astringent to the mucous membrane, and one of our best drugs in diarrhoea. In dysenteric diarrhoea or dysenteric discharges, combined with ipecac (decoction), it is a specific.

Podophyllin (trit.): Minute doses, three to five grains of the second decimal; pasty tongue, fullness of tissues; gray or clay-colored stools.

Reconstructive tonics, when indicated, as nux vomica, hydrastin phosphate, iron pyrophosphate and cornus florida, will aid our medication.

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## SPECIAL SOUTHERN NUMBER.

The January issue of the *American Journal of Surgery* will be composed entirely of original contributions from the pens of well-known Southern surgeons. Among those to appear we would mention:

"Pyuria," by Howard A. Kelly, M. D., Baltimore Md.

"Transfusion of the Blood, Its Indication and Technic," by J. Shelton Horsley, M. D., Richmond, Va.

"Tumors of the Lower Jaw, the Form Most Frequently Found in the Negro," by Willis F. Westmoreland, M. D., Atlanta, Ga.

"Pylorospasm," by Stuart McGuire, M. D., Richmond, Va.

"Prevention of Immediate Post-Operative Pain by Quinine Injections," by Drs. V. and V. W. Pleth, Seguin, Texas.

"The Importance of Educating the Public in Regard to Cancer," by Southgate Leigh, M. D., Norfolk, Va.

"Aerogenes Infections," by George R. White, M. D., Richmond, Va.

"Stricture of the Rectum, Complicating Fistulae," by C. S. Venable, M. D., San Antonio, Texas.

"Gastric Symptoms From a Surgical Viewpoint," by Louis Frank, M. D., Louisville, Ky.

Dr. Edgar D. Capps, of Ft. Worth, Texas, and H. Berlin, M. D., of Chattanooga, Tenn., will also contribute original articles to this number.

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# THE SICK ROOM.

## HYGIENE OF THE SLEEPING ROOM.

Between the extremes of "fresh air crank" and "catch cold crank," very sensibly remarks the *Charlotte Medical Journal,* there is a sensible moderation and in no place, perhaps, is this simple moderation more necessary than in our sleeping rooms. The hygiene of the sleeping room, however, involves more than just the freshness of air in the room. It involves the location of it, the furnishing of it, the airiness of it, whether it be light or dark and the size of it in relation to the number of people who occupy it.

As the proper hygiene of the sleeping room is a part of preventive medicine, it is within our province to discuss it. In fact, a good many naturally healthy human beings have their normal resisting power rendered vulnerable to the invading hosts of disease by sleeping rooms medically unfit for habitation. This statement not only refers to the houses of the poor but to those of the wealthier classes as well. Many diseases really gain their foothold in our bodies while we sleep. Ignorance of the proper hygiene of the sleeping room is one of the causes for poor sleeping rooms and neglect on the part of the doctor to discuss things with his patient and to seek to correct the errors that he sees is another.

In the first place, the sleeping rooms of our houses should be the best rooms; however, as a rule, they are the worst because company don't see them, whereas for the reason that company does see them the best rooms are usually given over to the parlor and sitting room. The sleeping room, if possible, should be large, light and airy, with plenty of windows on every side. This latter arrangement allows of fresh air at all times, without the discomfort of having everything blowing about, no matter in which direction the wind happens to be blowing.

If the room is to be occupied by more than one, the proper ratio of cubic feet of air space for each occupant of the room should be looked for. Each occupant should sleep alone and the beds should not be close together. Folding beds are not as desirable as others, for obvious reasons. A tendency to curvature of the spine will be prevented by having a good firm bed spring and over that a fairly firm mattress.

Washable blankets are the only coverings that conform to the rules of hygiene. Comforters, feather or cotton filled, are most glorious germ holders, and are mentioned mostly to be absolutely condemned. Besides the sheet covering the mattress, it is cleanly and, therefore, more healthy if another sheet is used between the night dress and the bed coverings. Iron beds are more healthy than wooden beds because they can be kept cleaner.

The floor covering of the sleeping room should be on the style of a rug, so that it can be taken up frequently and thoroughly cleaned in the open air. The floor should be of such a finish that it can be scrubbed several times a month with some good antiseptic solution and should be wiped up daily with a damp cloth. A damp cloth is used because dirt will cling to it; whereas, with a dry cloth dirt would be merely brushed from one spot to another and into the air of the room. The hangings of the room should be as few as possible, as they are merely ornamental germ gatherers. Such as are used should be of washable materials.

Soiled clothes should never be kept in the room while waiting for wash day to come around. If it is found necessary

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to keep portable toilet conveniences in the room at night they should always be of the covered variety and when not in actual use they should be kept covered. Food should never be kept in the sleeping room, nor eaten there except in cases of sickness where the patient is confined to bed. A sleeping room is not necessarily to be considered as well aired because it is cold. Impure air can also be sold. On the other hand, it is not necessary to have everything in the room blowing about as in a gale to properly air the room.

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### QUIETING THE BABY.

Remember, admonishes Dr. Register, in his excellent journal, that the best baby pacifier known is the very simple expedient of making and keeping your baby comfortable. A baby who gets enough to eat, gets enough sleep, and who is kept dry and clean in comfortable clothes with no pins sticking him anywhere, will be so busy crowing in his joy of living that he will have no time for fretting and irritability. It is your unwell or neglected baby that looks for any such artificial, imitation sort of comfort or solace as is given by a pacifier.

And that baby needs attention of another kind other than that false temporary quieting down induced by sticking a dirty bit of rubber into its mouth for it to suck on. Oh! yes, many babies who have had pacifiers survived and grew up seemingly as strong and healthy as babies whose doctors were wise and sensible enough not to hazard the lives of their little charges. But what about those who didn't? Ask the sorrowing parents who mourn the loss of their little "sunshines of the household." What about the doctors who did and still allow their patients to stick these "infant destroyers" into the mouths of their helpless babies? We are rather ashamed to admit that in this age of scientific medicine and knowledge of bacteriology that still such medical (?) men can be found, but it is our not vain hope that pretty soon they will be as scarce as the proverbial "hen's teeth." Should you be one of these won't you please give this subject the serious thought it deserves? If you do you will not only stop the use of them in your practice but will wonder why you ever allowed yourself to be guilty of using them.

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### POISONING FROM PAINTED BEDSTEAD.

Hirsch, in *Berliner Klinische Wochenschrift,* reports a case of lead poisoning in a two-year-old child. The child was brought to him with the history of continued vomiting and colic for six weeks. On the strength of this it had been treated at some clinic for whooping cough. The child vomited all food and was constipated. There was great pallor and emaciation and a scaphoid abdomen very painful to palpation. He elicited the history that for weeks the child had been gnawing and sucking at its bedstead, which had been painted by the child's father, who was employed in a dye and paint works. Inspection of the bed showed that the paint had been sucked off an area about 4 by 8 inches. Scrapings of the paint and a small portion of the child's feces both showed a large percentage of lead by chemical analysis. The child developed a weak, irregular pulse, and fatty renal epithelium and casts with traces of lead, were found in the urine. Pneumonia developed and terminated fatally. No blue line was found on the gums. Autopsy and microscopic findings showed fatty degeneration of the myocardium, the liver, and especially the renal epithelium, with the presence of pneumonia. Hirsch points out the danger from bedsteads painted with any preparation containing lead or zinc, since children often have the habit of gnawing and sucking at their bedsteads. He advocates laws forbidding the employment of paints containing lead or zinc for such purposes.

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## THE UNTRAINED NURSE.

*The Medical Times* holds that in not a few instances the physician is relieved of a disagreeable responsibility by the availability of a near relative of the patient, as a nurse. Perhaps, in the future, it will be a common custom for families of moderate means to send one of their girls to a training school, with no thought of professional career, but simply to provide for emergencies. Still, there are general objections to such a course, as for medicine, law and other professions. Constant practice is necessary for the best efficiency. Moreover, the average girl will, whatever her original intentions, be very apt to contract domestic ties of her own, and while such a one may be extraordinarily prepared for wifely duties, there will obviously be times when she herself will require care by another nurse. We recollect a superior girl who married soon after leaving the training school. She lived in a farming community and was constantly called to act as nurse as a matter of charity, until it became evident to her husband and herself, that, however much she was needed in this way, she was neglecting the place where charity is said to begin.

As we have previously declared, there is a field for the untrained or partially trained nurse, not as an ideal fulfillment of a want, but as a practical compromise with necessity. But there must also be some practical provision for highly skilled nursing in the families of independent, but small means. All things considered, we are inclined to think that this demand must be met, as are other emergent, accidental demands far beyond the probable immediate resources of the average family, by some form of insurance. As counter-insurance against the temptation to demand nursing for trivial conditions, we are inclined to think that the insurance should not be in full, but simply for the delivery of services at a reduced rate, say $5 a week and board. Just how such insurance should be conducted is, in itself, a complicated problem. Off hand, we should say that it should not be conducted as a business interest, but that it should be connected with hospitals or guilds, to which the beneficiaries contribute, and that the services of the nurses should be available for general philanthropic purposes when not needed by the members.

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## THE FARM BABY.

### Its Advantages and Disadvantages.

Of all the products of the modern farm, the baby crop is by far the most valuable, and calls for the greatest exercise of care in the raising. There are certain reasons why the farm baby starts out in life with an advantage over his city cousin; and, because we are often prone to overlook our own advantages, and so to miss availing ourselves of them, it may not be out of the way to point out some of the respects in which the baby born and reared on the farm has the better of the offspring of the city.

To begin at the beginning, the farm baby usually—not always, but usually—has the benefit of good, healthy stock. The rugged, simple life of the farm generally insures in the parents a sturdy strain which is an inestimable physical capital to the child of such parentage. And the value of this kind of a foundation is seen in the fact that the men who weather the strenuous, nerve-racking life of the city best, and last the longest under it, are always the men whose boyhood was spent upon the farm. So, even before it is born, the farm baby has the goods on the city baby.

Then the farm baby has all the advantages of pure air, fresh milk, and later, good farm food, all of which, intelligently utilized, reinforce the healthy stock inherited by the child, and make a strong, healthy man or woman out of it. It is not alone that these advantages are obtainable in the country, which are so hard to get in the city, but they are within the reach of every farmer, no

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matter how modest his circumstances, being, indeed, part and parcel of the necessary product of his farm.

In addition to these material advantages, the farm baby enjoys the tremendous benefits of the simple life. The fet and fever and stress of the city, with its struggle for existence and its artificial conditions, neither hamper nor unnaturally force the growth of body or mind. The child of the farm is brought up in quiet, restful, elementary surroundings, which best conserve the nerve energy and favor normal, wholesome development. The farm boy and girl come into touch, from the earliest dawn of consciousness, with the simple, real things of nature, and acquire right ways of thinking and the habit of looking on the natural side of everything. They get very close to the heart of things—which, undoubtedly, accounts for the solid success that they usually achieve when they grow up and go to the city.

In all of these respects the farm baby is fortunate above the lot of the city baby, and it is not without reason that, just as we look to the cereal and vegetable and live-stock crops of our farm lands to supply the country with foodstuffs, so we look to their baby crops to furnish our cities with the physical and mental and moral backbone that they continually need.

**Disadvantages.**

Has the farm baby, then, any disadvantages, as compared with the city child? We verily believe he *need* not have, if only farm parents are alive to their opportunities. We do not know of any positive disadvantages pertaining to the farm as a rearing place for children. Such as he does suffer from are either a perverse failure to utilize the advantages, or else an overdoing of them.

As, for instance, in the matter of heredity. The normal rugged life of the farmer produces a correspondingly rugged strain in the offspring. But it is not altogether uncommon for the farmer and his wife to overdo the strenuous life of the farm, and thus to break down their strong constitutions, forgetting the duty they owe to their children of bequeathing to them a healthy physique. Of course, the city parents do the same thing, a great deal more often, but the fact is, the farm baby is worse off in such a case than the city child, because the farm baby is expected to stand up under the same rugged life that should have made his parents strong, whereas the city child escapes a great deal of this physical strenuosity.

Again, in the matter of food. Because the farm affords the possibility of clean, fresh milk, pure air, and wholesome food, it by no means follows that all farm babies get these things. Farm folks unfortunately, are just as careless as city people in such matters. If they were not, the city babies would fare better. And in this respect, also, the farm baby suffers from neglect more than the city baby, because in the cities there are health boards that look after the milk, but nobody inspects the milk that the farmer gives from his own cows to his own children. Then, as to fresh air, there seems to be a contrary sort of spirit among many farm folks, perhaps in accordance with the proverb that "familiarity breeds contempt." Any country physician will tell you that farm people are the greatest sinners about close rooms of anybody he knows, especially in the case of babies and sick folks. The city mother, doubtless because she knows how scarce an article it is, values fresh air, and gets all that is available. The farm mother, possibly because she has so much of it around her, is too often inclined to shut it out. And the farm baby, deprived of the air that his lusty lungs need in even more abundance than the city child requires, is not infrequently made a victim to tuberculosis and other lung disorders.

And, finally, the quiet, simple life which we spoke of so highly may be overdone, so as to become dull monotony and tiresome routine, which is just as

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bad as, if not worse, for the development of the body and mind, than high-tension, and produces an abnormal child of even a worse type than the precocious one. There is a general idea that the city mother is usually too busy with social or domestic duties to give personal companionship to her children, while the rural mother gives herself to her family. But our experience has been that there is just as great a tendency for the farmwife to get the "too-busy" habit, as for the city housewife. "All work and no play" is the great menace of the farm life, and it not only makes father and mother "dull boys," but it is injurious to the development of their children. To be sure, it is not such a danger nowadays as it was years ago; and, by the same token, there is less excuse nowadays than formerly. Modern enterprise has put the farm into touch with so many means of diversion and recreation that the farmers family is almost on a par with the city family in this respect.

We point out these possibilities of disadvantage to the farm baby in the hope that our readers will be lead to avoid them, and thus to keep up the high standard of this important crop.

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### WAS WELL PAID.

Once upon a time there was an Indian named Big Smoke, employed as a missionary to his fellow Smokes.

A white man, encountering Big Smoke, asked him what he did for a living.

"Umph!" said Big Smoke, "me preach."

"That so? What do you get for preaching?"

"Me git ten dollars a year."

"Well," said the white man, "that's damn poor pay."

"Umph!" said Big Smoke, "me damn poor preacher."

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### SPECIAL SYPHILIS NUMBER.

The editors of the *Interstate Medical Journal*, St. Louis, announce the publication of a symposium number on Syphilis for January.

The list of articles reads as follows:

"The Influence of Syphilis on Civilization," Wm. Osler, M. D., Oxford University.

"Present Status of the 'Noguchi Test,'" Hidego Noguchi, M. D., New York.

"On the Means of Finding the Spirochaeta Pallida, With Special Reference to the India Ink Method," (From the Laboratory of the Michael Reese Hospital), J. S. Cohn, M. D., Chicago.

"The History and Methods of Application of Ehrlich's Dioxydiamido-arsenobenzol" (from the Royal Institute for Experimental Therapeutics), Lewis Hart Marks, M. D., Frankfurt am Main.

"Recent Progress in the Treatment of Syphilis," H. Hallopeau, M. D. Paris.

"Treatment of Syphilis with Ehrlich-Hata '606'," Abr. L. Wolbarst, M. D., N. Y.

"Syphilis of the Nervous System," Ernest Jones, M. D., Toronto.

"Syphilis and Pulmonary Tuberculosis," Robert H. Babcock, M. D., Chicago.

"Syphilis as a Cause of Pauperism," A. Ravogli, M. D., Cincinnati.

"Giant Cells in Syphilis," John A. Fordyce, M. D., New York.

"Personal Observations with the Ehrlich-Hata Remedy '606,'" B. C. Corbus, M. D., Chicago.

"Syphilis and the Public," Isadore Dyer, M. D., New Orleans.

"Sanitary Regulation of Prostitutes," Prince A. Morrow, M. D., New York.

In addition to the above, there will be four "Collective Abstracts" (critical reviews of recent literature in collective form) on (1) Ehrlich Hata "606," (2) the Cerebrospinal Fluid in Syphilis and Parasyphilitic Diseases, (3) Serum Diagnosis of the Osseous Lesions of Syphilis by the X-Rray.

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# REFRACTION.

## A HYPEROPES NEAR VISION.

THE question is frequently raised, especially by young refractionists, as to just what is the element in a hyperopes near vision which causes him so much trouble and discomfort. It is quite simple.

The difficulty experienced by hypermetropic subjects in doing near work is caused by the strain on the ciliary muscle. Whereas, an emmetropic subject requires 3 D. of accommodation to work at 33 cms., a subject with, say 4 D. of hypermetropia will require 7 D. Now, let us suppose both subjects to be 20 years of age, i. e., having an accommodative power of 10 D. It has been found by observation that a subject can do prolonged near work if he is able to hold in reserve one-third or one-fourth of his total amplitude. The emmetropic subject could easily exert 6 or 7 D. of accommodation, and has, therefore, no difficulty when only 3 are required. But the hypermetropic one, having one to accommodate 7 D. is evidently just on the borderland of eyestrain.

The subjective determination of the total amount of hypermetropia, especially in young subjects, is difficult, owing to the frequent existence of a spasm of accommodation due to cramp or excessive and involuntary contraction of the ciliary muscle. In such cases, not only does the action of the ciliary muscle conceal the existence of hypermetropia, but it sometimes passes into a condition of tonic contraction in excess of that required for distant vision, so that the eye is maintained in a condition of accommodation for near objects. As this spasmodic contraction cannot be voluntarily relaxed, the eye appears to be myopic.

This spasm of accommodation undergoes a partial and sometimes a complete relaxation in the dark, so that by retinoscopic examination in a dark room, the apparent myopia may be proved fictitious and the existence of hypermetropia diagnosed.

## CATECHISM OF REFRACTION.

(Continued from Page 730 in the December Number.)

### Correction of Myopia.

Q. What is the chromatic test in myopia?

A. In the myopic eye the violet rays, being refracted more quickly than the red, have come to a focus and crossed by the time they reach the retina, while the red rays, being less affected by refraction, have scarcely come to a focus at the retina. Therefore, the appearance of the candle flame is that of a violet margin around a red center.

Q. What is the distance test for myopia?

A. The myopic eye is quite unable to read letters No. 6 at a distance of 6 meters, because the parallel rays which proceed from those letters are focussed before they reach the retina, and as the patient's eye is already in the least convex condition that it is capable of assuming, it has no further means of adjusting itself to the premature focussing of the rays.

N. B.—The astigmatic eye is also unable to distinguish No. 6 at six meters, and it is sometimes hard to differentiate at once between a simple myopic and an astigmatic eye. In astigmatism, however, the inability to decipher the letters is not usually so complete as in myopia: and further tests will disclose the difference.

Q. How are the lenses manipulated in this distance test?

A. Having tried a weak convex lens and found that it makes vision still more

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blurred, we try a weak concave lens, and find that this improves the vision, because it delays the focussing of the rays, thus lessening the area of diffusion. We then try successively stronger and stronger concave lenses until we find the one which so delays refraction as to make the rays focus exactly on the retina, thus enabling the patient to read clearly No. 6 type at six meters. This lens makes the rays, as they enter the myopic eye, equivalent to parallel rays entering a normal eye, and is, therefore, the measure and correction of the myopia.

Q. What are the retinoscopy findings in myopia?

A. The rays emerging from the myopic eye are convergent. If the degree of myopia is high, they are very convergent, and will have met and crossed before they reach the observer's eye at one meter; but if the myopia is of a low degree, and the rays only slightly convergent, they will not have met by the time they reach the observer, but they will be tending to meet.

In high myopia, therefore, the shadow will be at once seen to move with the mirror, because the emerging rays have crossed before reaching the observer at one meter. In order to bring the point of reversal at one meter, the focussing must be delayed, and to do this a concave lens is required. The lens which accomplishes this, with the plus 1 D. of the normal algebraically subtracted from it (arithmetically added to it) is the measure of the myopia.

In low myopia of less than 1D. the rays, although convergent, will not quite have met at one meter, and it will still require a plus lens to make them do so, but a lens of less strength than normal. The amount, therefore, that this lens is less than 1 D. is the measure and correction of the myopia.

In myopia of just 1 D., of course, no lens will re required at all to bring the point of reversal at one meter, since the emerging rays will converge to just the extent necessary to bring them to focus at one meter without any aid.

Q. What does direct ophthalmoscopy show in myopia?

A. The rays emerging from the patient's eye, as stated, are convergent, and, therefore, in the normal, unaccommodated eye of the observer, they will be focussed prematurely, and he cannot get a clear view of the patient's fundus. A convex lens makes matters worse. We, therefore, try successively stronger concave lenses until we find one which will so delay the convergence of the emerging rays as to render them parallel and thus focus them on the observer's retina, as evidenced by his getting a clear view of the fundus. The strength of the lens required to do this is the measure and correction of the myopia.

Q. What do we find under indirect ophthalmoscopy?

A. The rays from the patient's eye, being convergent, will strike the objective lens at a more and more convergent angle, the further the objective is held from the patient's eye, and will, therefore, be brought to a focus nearer and nearer within the focal length of the objective lens, making the image larger and larger. The weakest concave lens which renders the image the same size, at whatever distance the objective is held from the patient's eye, so that the image neither increases nor decreases in size as we withdraw the objective, is the measure and correction of the myopia.

Q. What are the special considerations of myopia?

A. Myopia is much less common than hyperopia, being in about the proportion of 1 to 15. Since its functional morbid element consists in a constant necessity for relaxing, rather than for exercising, the ciliary muscle, it is not, as a rule, attended with any eye-strain, nor does any latent spasm develop, so that the correction of the error is generally quite simple and straight-forward. As

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against these favorable features of myopia, however, must be set the consideration that, while hyperopia is generally a sheer congenital error or refraction, not involving any physical disorder of the eye itself, myopia is almost always a pathological condition, in many cases acquired, and unless properly corrected by lenses and subjected to intelligent hygiene, tends to grow progressively worse, with ultimate danger to the eyeball.

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## PRESBYOPIA.

The presence or absence of presbyopia, says the *Optical Journal Review,* is usually easily discovered. When the correction for distance has been found and has been placed before the eye under test, then if there is presbyopia it will be impossible to read at the reading distance the type which should be read at that distance, and all type viewed at that point will be blurred more or less. Putting on plus spherical power will cause these appearances to disappear. However, if there is a condition of subnormal visual acuity present, there will be a lack of reading power, but the balance of the tests made will make clear the true state of affairs.

### The Correction of Presbyopia.

The correction of presbyopia would seem at first sight to be a very simple piece of business, and yet if the refractionist of many years' experience is asked which class of cases gives him the most trouble, he is apt to answer, "the presbyopes." There are a number of reasons for this; one is that the wearer of the glasses does not know just what glasses can do; he wants a pair with which he can see both far and near as well as he used to; or the glasses are rather high in power and he is bothered by the changes in prismatic action of the lenses as he looks at objects at different distances. As a rule it is most satisfactory to correct presbyopia for a point somewhat farther away than the wearer of the glasses says is his reading point. A good way to get an idea in the matter is not to ask the patient to hold print at the point where he thinks he reads, but to hand him a card of printed matter to look at while you are attending to something else, and then to watch and see where he holds the card to read, but with nothing previously said about his reading it. He will naturally read the card, as he has nothing else to do, but nothing having been said as to the distance, he will hold the card at that distance at which he usually reads and not at the point where he thinks he reads it. Then correct for a point a little farther out than this, and the best general result will be reached.

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## EFFECTS OF ULTRA-VIOLET RAYS.

*The Optician* calls attention to the fact that an inflammation, known as electric ophthalmia, is produced by even brief exposure of an unprotected eye to ultra-violet rays of very short wave-lengths. Fortunately, these rays are absorbed by glass, so that the eye can easily be protected against them. The question has recently been asked whether the ultra-violet waves of greater wave-length, which are not absorbed by ordinary glass, and which are much more abundant in the radiations emitted by electric lamps and incandescent gas mantles than in the light furnished by old-fashioned gas burners and kerosene lamps, may not also injure the eyes.

Dr. Schanz, of Dresden, attributes ocapity of the crystalline lens and senile cataract to the agency of these rays. As sunlight and diffuse daylight, to which the human eye has completely adapted itself, and which may, therefore, be regarded as the normal illumination, likewise contain the longer ultra-violet waves, the important question is whether the eye receives such waves more abundantly from the modern powerful artificial sources of light, arranged in the usual way, than from daylight of equal illuminating power.

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Dr. Voege, of Hamburg, has proved by numerous comparative tests that ultra-violet rays are far more abundant in daylight than in light of equal intensity furnished by incandescent electric and gas lamps, and most electric arc lamps. An eye looking at an arc lamp receives fewer ultra-violet waves than it would receive from the rays of the sun reflected to it by a bit of polished metal at the same distance. Hence the modern powerful lamps are not injurious to the eye if certain precautions which are required for the visible as well as for the ultra-violet rays, are observed.

A powerful source of light should not be placed too near the eye, and an unnecessary intensity of illumination of the desk or work table should be avoided. The lamps should be so arranged and shaded that the dazzling incandescent source of light is not directly visible. The best method of illumination is the indirect system, in which the rays strike a white ceiling and are thence irregularly reflected to the table, producing an illumination very similar to that of diffused daylight. Unshaded incandescent gas lamps should be inclosed in opal or ground glass globes. For work with arc lamps and other lights of great photographic intensity spectacles made of glass which possess an especially great power of absorbing ultra-violet rays should be employed.

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### ACQUIRED MYOPIA.

Almost all cases of myopia are acquired. With very rare exceptions children, when born, have hyperopic eyes, which tend normally to change to emmetropia in a few years, this due to the growth of the eyeball. But this growth may be made excessive as the result of the use of the eyes for looking at near objects. The convergence of the eyes, the need of exerting the ciliary muscle, brings a blood supply to the eyeball, which increases the tension, with the result that the eye as a whole, or else the front or rear portion of it, stretches, thus making the distance from front to rear greater, which means, of course, myopia. Where this action is excessive the resultant myopia is looked upon as malignant, and is believed by some specialists to be a sign of general disease, rather than a disease in itself.

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### BIFOCALS.

The presbyope who is also a hyperope, or if he has astigmatism of moderate or high degree, must wear double focus glasses if he is to have good vision for both far and near. A lens placed before an eye without accommodation can focus that eye for one distance and no other, so that if the glass is so arranged that in a certain portion of the lens there is attached another lens of different power, then this would be a double focus or bifocal lens, through a part of which the eye would be focused for one distance, and through the other for another distance. The presbyope if he is also an ametrope must, if he is to get the best of vision, wear such a lens. There are many cases where ametropes do not wear bifocal lenses, neither do they make use of two different pairs of glasses, but this is because they are not called upon to make exact use of their eyes for any but close distances; therefore, they are satisfied with the one pair of glasses, though they may have to look over the top of them when they want to look across the room or farther away.

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### APHAKIA.

This is a name given to that condition of the eye where there is no crystalline lens present. It is a very great rarity for an eye to be found in this condition except as the result of an accident or the removal of the lens because of cataract. A cataract is a translucent lens. When fully developed it lets a little light through, just as does a sheet of ground glass, but there is no vision, and to give vision the lens is removed. The eye is then said to be an aphakik eye, the diop-

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tric power being usually such that a plus 10 lens, or thereabouts, has to be worn to give a distinct retinal image. Aphakik eyes are tested in the same way as other eyes, but the visual acuity is seldom up to the normal and may be much below that point. The idea that the sight of the old person will be restored when the crystalline lens has been removed is a half truth. As a rule, sight is given to the person, but not the sight of his youth, for the scar left on the cornea by the operation, and the pulling of the tissues of the cornea as the result of this operation, produce a more or less imperfect corneal surface that continues.



## REFRACTION IN BACKWARD CHILDREN.

Dr. John Lewis Beard, in *The Educator,* says that most children who are considered backward—not to say mentally abnormal—by their teachers—are suffering from some asthenopic condition—some imbalance of the muscles of the eye, very often combined with an error of refraction—which if relieved would, in most instances, mark a very decided improvement in their mental status. And before a verdict of incorrigible is rendered a special investigation of the eyes should be made; not a simple test for visual acuity, but a thorough diagnosis by a competent optometrist. Indeed, every teacher should have special training which will enable him to determine whether or not a pupil's eyes are normal. Not that he should be qualified to differentiate in the variety of errors, but, for instance, when his pupil persists in calling erroneously from the blackboard, the teacher should have some simple method of determining the pupil's ability to see, and if his vision is found to be defective it should be his duty to report the condition to the parents or guardian of the child.

It is not always a case of poor vision, however, for frequently one's vision may be normal, as in instances where the disturbing cause is hypermetropia, and the accommodative muscles are exercised to obtain good vision, from which nervous reflexes ensue, and the patient is incapacitated; or it may be the accommodation and convergence do not function harmoniously, or there exists a heterophoria—a tendency of the visual lines away from parallelism—caused by weakness of one or more of the motor muscles, while the focusing apparatus may be normal, the patient suffering nervous disturbances meanwhile, which are sometimes manifested in headaches, nervous stomach trouble, insomnia and even epilepsy and insanity, for, be it known, we *do not see with the eye,* nor with the optic nerve, but with the *brain;* and that portion of the brain which receives the visual impressions, the corpora quadrigemina and the thalamus (from which the optic nerve is supposed to originate) are greater in area than any lobe of the brain devoted to a special function.

And when we remember that all the motor muscles of the eye except the superior oblique, which rotates the eyeball downward and inward, and the external rectus, which rotates the eyeball outward, are supplied with nervous energy by the third cranial nerve, while the superior oblique is supplied by the fourth cranial, and the external rectus by the sixth; and that the ciliary receives its supply from the ciliary ganglion, and the optic nerve originates in the cortical center in the great occipital lobe, and is the one nerve which transmits the majority of the impressions received by the brain —in fact, is the main line in the great telegraphic system—we realize how the short-circuiting of any of these wires (nerves) may produce disastrous effects; and how a boy or girl who suffers from any abnormality of vision may appear mentally defective and refractory, and how important the intelligent dealing with these cases becomes.

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# ELECTRO-THERAPY.

### CONSERVATIVE ELECTRO-THERAPY.

Electro-therapy frequently has been held at a low estimate by the profession because of the extravagant and apparently unreasonable claims made by many of its advocates, who proposed to cure everything with electricity to the exclusion of all other methods.

It was not unnatural, therefore, that those unfamiliar with the use of this measure, should go to the other extreme and believe electricity of absolutely no therapeutic value whatsoever.

Now comes the sane and conservative physician who is fair enough and broad-minded enough to ascertain for himself the merits of the various electrical modalities and to fit them in with his other therapeutic aids. He finds them perfectly compatible with his drugs and with surgical procedures and most valuable allies, enabling him to accomplish results hitherto impossible.

When we say conservative we mean careful and using discernment and judgment. It does not mean condemning everything that is new because one is unfamiliar with it, but it means investigating it carefully, but fairly, and resting one's judgment and use upon the result.

Each electrical modality meets certain therapeutic or clinical indications. When these are present the appropriate measure will give positive and reliable results. just as would be expected of a drug under like circumstances.

To practice medicine with but one drug would be obviously absurd, and to expect to use one form of electricity for all conditions is equally so.

A few years ago the X-ray was lauded as a cure for almost every disease that human flesh is heir to. Then came the reaction and it was claimed by many to possess no therapeutic properties. This equally erroneous position could not be long maintained, and now we recognize its absolute value in certain diseases; its relative value in others, and finally, its utter uselessness in a considerable number.

What is true of the Roentgen ray is equally true of galvanism, high frequency, vibration, etc.

We must look upon each of these from the standpoint of its physiological action and make use of it accordingly.

Drugs, diet, hygiene, electricity, surgery, etc., all have their appropriate use, and in the hands of the skilful and broad-minded physician work harmoniously with one another for the benefit of his patient.

### GALVANISM IN POLIOMYELITIS.

Tom A. Williams, in the *Maryland Medical Journal,* calls attention to the fact that little children are reluctant to essay movements of a partially disabled limb. When it is an arm they let it hang and use the other; if it is a leg they make no effort, and prefer to be nursed and waited upon. Suspension in water greatly facilitates movement when the muscles are feeble. He confirms the experience of the New York Committee, who found out how easily a child in a bath could accomplish little movements which he was unable even to attempt when his limb was not so supported, and it is very easy for the mother or nurse to invent little play-games to maintain the child's interest for an hour at a time while suspended in a warm bath. There is no danger in this so long as the water is maintained near blood heat. The skin does not macerate, and the effect upon nutrition is most favorable.

To stimulate the circulation in the limbs they should be gently massaged several times a day.

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*Galvanism.*—But from the foregoing procedure one must not expect to procure regeneration of atrophied muscle or nerve. Surgeons know well that the muscles supplied by a cut nerve atrophy and will not regenerate, although they are massaged till doomsday. If, however, they are galvanized from the beginning, atrophy will not occur, for the exercise of their contractile functions maintains the integrity of the muscle elements, and it is only galvanism which can excite contractility when the motor nerve and its endings have degenerated. If treated by galvanism from the beginning, a living muscle cell will greet each regenerated nerve fiber which pushes to its destination. If galvanism is not used, the envelopes of only dead muscle-spindles will be met with. The time for these to regrow must be added to the duration of every case not treated by galvanism. It is necessary to restate these simple physiological facts on account of the vogue of the pernicious statement that no treatment of poliomyelitis should begin until four months have elapsed. This doctrine is another instance of unthinking orthodoxy. But if the elementary physiological considerations just presented make no appeal, the author cites the high authority of Erb, Bergonie, Zimmern and Zappert, the distinguished Viennese peditatrician (added to that of Duchenne's final experience), who make a practice of galvanizing the paralyzed muscles just as soon as the acute symptoms subside.

*Mode of Application.*—The current should be applied only to those muscles which are paralyzed, and the negative pole should be placed over the muscle itself near its tendon of insertion, while the positive pole should be attached to a large electrode applied over the abdomen or other indifferent point. It is useless to stimulate the motor point except during the first two weeks, *i. e.*, before nerve endings have ceased to be stimulated on account of degeneration.

## X-RAY IN CANCER.

Pusey, in a comprehensive article in the *Journal of the A. M. A.*, says: No one who is not blind to facts can doubt, if he will take the trouble to investigate, that carcinomatous tissue in the skin can be destroyed with X-rays. On the basis of a large experience in primary and secondary carcinomas of the skin, he states he is willing to maintain that carcinoma tissue in the skin can be destroyed by exposure to X-rays as by any mechanical or chemical method; that the method, therefore, can be used with assurance, and that the results as regards permanency are fully as good as those obtained by any other methods. There are certain theoretical advantages which the use of the X-ray offers over other destructive methods.

*First.*—It is painless and avoids the ordeal of operation. This is an advantage not only of humane consideration, but of practical importance, because it enables one to treat early lesions in cases in which the patient will not at any time accept the gravity of the situation and submit to operation or any other method of gross destruction.

*Second.*—The method may be so used as to destroy carcinoma cells, but leave in large part the connective tissue stroma intact and in condition to repair itself.

*Third.*—Accordingly it leaves small scars.

*Fourth.*—It can be used in cases in which the surrounding healthy tissue cannot be sacrificed. This means that:

*Fifth.*—It is valuable in certain cases in which ordinary methods are objectionable, because they involve extensive operations and serious subsequent disfigurements, as, for example, about the eye and nose. This means further that:

*Sixth.*—It has a field of usefulness in some cases in which ordinary methods are impossible, because of the amount of destruction of tissues which complete removal would require; in other words, it may be used to produce a radical result in some inoperable cases and to im-

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prove and inhibit the course of other inoperable cases.

These theoretical advantages of the use of X-rays are a practically verbatim quotation of a statement of Pusey's published seven years ago, and his subsequent experience confirms him in the belief that their accuracy has been established by practical results.

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## X-RAY IN MALPRACTICE.

The use of the X-rays opens up an entirely new field of medical jurisprudence, of which the following case in the Missouri Court of Appeals is a notable example: A patient sued a physician for damages for malpractice, alleging that he negligently, carelessly, and unskilfully applied the X-rays to the plaintiff's hand, and also caused the hand to be exposed to the rays eight or nine times, and for such length of time as to cause the skin and other tissues of the hand to be severely burned.

It appeared that the plaintiff, who was a machinist, while working at his trade, sustained a supposed scratch in the palm of his hand. Later a red spot, about the size of a half dollar, appeared in the center of the palm. The plaintiff's evidence showed that he consulted the defendant about it and was told by him that he had dry tetter, or eczema. He employed the defendant to treat him, and the defendant commenced to do so by applying a salve to the spot. The treatment, by various applications, was continued for more than a year without relief. The defendant then told him he would have to use the X-rays on the hand, that this would cure him and would not interfere with his work.

The X-ray treatment was applied. The defendant told him to hold the palm of his hand about half an inch from the energized tube. He exposed the plaintiff's hand to the rays nine times in eleven days, each time directing him to hold his hand about half an inch from the tube. The exposures varied from 10 to 35 minutes. After the eighth treatment the plaintiff complained to the defendant that his hand was burning and paining him and afterward the defendant gave him another treatment of 10 minutes' duration.

Plaintiff claimed that his hand became badly swollen; that the defendant scraped the skin until he got it nearly all removed from the palm; and that he scraped the hand to remove the parts which appeared to have been burned or cooked by the X-ray; that he suffered great pain and could not sleep nights, although the defendant administered 25 drops of laudanum.

The hand was exhibited to the jury, showing that the injuries had resulted in a "claw hand." The defendant testified that the hand was exposed the number of times claimed, but that it was protected except over the spot to be treated, and that the hand was placed not closer to the tube than six inches, and the plaintiff was cautioned to keep it at that point. A number of physicians and surgeons testified that the X-ray at the time (1902) was a proper treatment for injuries such as the plaintiff had. Their testimony showed that the proper treatment was to place the hand at from six to twelve inches from the tube, and to leave it thus exposed for different periods of time to be determined from the result of the treatments. The witnesses were agreed, therefore, that if the hand was treated as claimed by the plaintiff the defendant was guilty of negligence, and if it was treated as claimed by the defendant he was not guilty of negligence.

Under these circumstances the court held that the issue was plainly for the jury, who in the court below returned a verdict for the plaintiff of $5,583.33 damages. Although the plaintiff's evidence as to the manner of applying the X-rays stood alone and that of the defendant was corroborated by two other persons, the plaintiff was also corroborated by some of the physical facts in the case. The expert testimony tended to show that

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if the hand had been treated with the X-ray as defendant claimed it was, there was not much likelihood of it being burned as it was.

The court considered that the plaintiff's case was supported by substantial evidence. It was held that the circuit court judge had properly declared the law defining the duty of a physician in charging that where one holds himself out to the public as a physician, the law implies a promise that he will use reasonable skill and diligence in the treatment of those employing him, and that a physician need not exercise extraordinary diligence or care in treating a patient, but only reasonable care, and that he is not responsible for errors of judgment or mistake in matters of doubt.



## ELECTRIC BURNS.*

C. F. Murbach, M. D.

The subject of electric burns and its treatment is one of great interest and practical significance to the medical profession. In the past decade or so it has been becoming more prominent and of greater importance.

Most of the cases coming to our attention have been linemen who work continually with currents of high tension. The burn or shock is caused by a short circuit or coming in contact with an uninsulated wire. These currents may be of the direct, the indirect, or alternating; the alternating or indirect currents of the same strength and tension being more dangerous than the direct. The lower limit of danger is set at about five hundred volts (Kratter). Moisture aiding electric conduction, makes it an extremely important factor in the handling of high tension currents, and is much more dangerous in wet weather.

Aside from the injuries due directly from the electric shock, we find flash burns caused by completing the circuit with tools, which are similar in many respects to the ordinary burns. Here we may find the various degrees of burns—a burn of the first degree, in which only a hyperæmia results, or one with the formation of a blister. Also we may find burns of the third degree, in which greater or lesser areas are deprived of nourishment, causing a necrosis of tissue and followed by sloughing. The sloughs have a whitish appearance, due to the coagulated albumen. A still more severe burn may result where we have a charring or carbonization of the tissues.

In electrical burns the area destroyed may seem at first to be of only small consequence, while later an area of demarcation appears and sloughing occurs over a considerably wider area. A report of a case will explain this statement:

Case W. H., Lineman, working on a pole, received 10,000 volts; unconscious for a short time; was suspended from a pole by his belt; had to be carried down; only local signs of injury were flash burns of both hands over small areas; on right hand there was only a small blister about the base of the thumb and small punctured wound; later an area of demarcation set in about base of thumb, which would show that the nerve and blood supply was destroyed in the part and amputation was necessary.

We have to deal with both the local and general symptoms. The local results in the various degrees of burns, punctures and lacerations of tissue, etc., with their sequelæ. The general, when the effects are not fatal, the person is suddenly rendered unconscious, lasting from a few minutes to a few hours, and several days afterwards may experience symptoms of vertigo, prostration, headache, and palpitation of the heart.

The autopsy findings, aside from the burns at the points of contact, are the evidences of suffocation and hypervenosity of the blood, stasis of the blood in the thoracic vessels, and often small scattered hemorrhages which are due partly to suffocation and partly to the direct action of the current.

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The immediate cause of death is the paralysis of the respiratory or cardiac centers.

*Treatment.*—After the victim has been taken out of the circuit, the treatment depends upon the effect produced, which varies from a disagreeable sensation to loss of consciousness or death. In cases in which the respiration is affected, artificial respiration should be started immediately about twelve to eighteen times a minute. Much depends upon this, and it should be kept up for at least an hour.

According to Crile, the chances for recovery are poor after seven or ten minutes. Circulation and respiration may be re-established, but consciousness is not regained, because after that length of time of cerebral anæmia, brain recovery is poor.

The local symptoms, which also vary considerably as to their seriousness, next require special attention.

If the tissue is only injured without any positive cell destruction, only a protective dressing is necessary until nature can repair the injury.

In cases of more severity, measures should be taken to combat the infection which may take place from the tissues surrounding the burned area. Primarily, I think electric burns are sterile which may become infected from without. The extravasation which poured forth to soothe the damaged part is excellent material for the support and proliferation of micro-organisms.

Morphia may be necessary for the pain. Great relief, however, may be obtained by immersing the part immediately in cold water, or by covering with a wet dressing of boric acid, or, better still, by a solution of picric acid, alcohol and water.

If sloughing occurs as the result of charring or infection, then a wet dressing of boric acid or bichloride should be used. This should be changed often enough to keep the surface clean and free from pus.

Later the sequelæ, viz.: contraction, pyaemia, septicaemia, tetanus, etc., require further care, and when large areas have been destroyed, skin grafting may become necessary.

In concluding, I wish to emphasize several points: First, the necessity in combating infection which may occur from without; that the areas of the slough are usually much larger than it seemed at first; and also that these burns take two or three times longer to heal than ordinary burns, and require careful attention.

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*Read before the Portland City and County Medical Society, and reported in the Medical Sentinel.

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## THE FARADIC CURRENT.

F. M. Taylor, in *Northwestern Medicine,* says the faradic current is not capable of producing electrolysis or cataphoresis, but muscular contractions occur when the current is applied to the motor nerve. It is difficult to excite the nerves of special sense. The nerves of ordinary sensation, on the other hand, are very readily excited. A strong faradic current is said to produce a benumbing effect on the sensory nerves, and Dr. Aust-Lawrence and Dr. Newnham have made successful use of this property in gynecologic cases. It has also been made use of for deadening the pain attending the extraction of teeth. The sudden shock of a faradic current applied to the root of a tooth might certainly serve to distract a patient's attention.

Like the static current, the general action of the faradic is to excite function. For the motor and sensory nerves, it is the best and most convenient stimulus we have. By this property it exercises the muscles, increases metabolism, helps nutrition and produces a general tonic effect.

In various diseased conditions the normal reactions of muscles and nerves to electrical stimulation are altered. The changes may be either quantitative or qualitative. In cases of quantitative

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changes, the nerves or muscles may be superexcitable or subexcitable or they may not react at all, or combinations of these conditions may exist. Faradic superexcitability is met with chiefly in conditions of irritation, where the reflex excitability is also heightened, as in chorea, tetany, spastic paralysis, early stage of locomotor ataxia, and hysterical paralysis. Galvanic superexcitability is found in the same class of cases as the above, but with some important additions as regards the muscles, viz., in the early stages of peripheral neuritis of all kinds.

Faradic subexcitability is met with in peripheral neuritis, pseudo-hypertrophic paralysis, myopathic muscular atrophies, long-standing cases of locomotor ataxia and whenever the reaction of degeneration is complete. Galvanic subexcitability, is present in pseudo-hypertrophic paralysis, myopathic muscular atrophies, and cases of protracted reaction of degeneration. The surgical use of electricity is limited principally to the removal of hair, moles and warts by electrolysis.

As stated before, the principles of electro-therapeutics rest more upon an empirical than upon a physiologic basis, and though we have the records of more than a century to guide us, yet these were, until the last few years, deprived of much of their value from the want of scientific measurement and dosage.

The therapeutic use of electricity may be broadly founded upon three chief groups of effects: (a) stimulating, (b) sedative, (c) trophic. The stimulating effects are especially yielded by the static and faradic, or by the galvanic if the current be interrupted or reversed. The sedative effects may be obtained from the static and galvanic electricity.

Trophic effects: All forms of electricity, but especially the galvanic, have been credited with nutrition modifying and encouraging powers. It would appear, however, from D'Arsonval's researches, that a continuous galvanic current possesses no such properties, at any rate on the general system, when in health. On the other hand, the static bath and alternating currents of all kinds, do exhibit these effects, which we may ascribe chiefly to nervous stimulation. Locally, no doubt, the constant galvanic current produces certain nutritive changes, but these are confined to the poles, and are of an essentially destructive nature. If the galvanic current be interrupted, then those properties that depend upon stimulation come into play.

## MEANS OF PRODUCING $CO_2$ SNOW.

Owing to the fact that a suitable instrument to produce and mold solid carbon dioxide was missing during the first years of the applied carbon dioxide therapy, it was left to the originality of the operator to produce it as best he could.

These methods were necessarily crude; however, they enabled the profession to obtain practical results.

In Gottheil's method a folded towel or a piece of chamois skin is applied to the vent in such a way as to be in sufficiently close contact with the orifice. He sometimes uses a cylindrical staff or short piece of broomstick to get a proper cavity in the towel, removing it after the first windings of the retaining bandage have been put on. With ordinary rollers this hollow towel or bandage is firmly bandaged to the vent and heavily re-enforced. It is well to use plenty of bandage and to wind it tightly around the neck of the vent and top of the cylinder, for on this depends the amount of pressure that can be used without rupture or escape of gas and the hardening of the ice. With the key the gas is then turned on at the tap, slowly at first so as to permit the ice to freeze in the meshes of the container. Clouds of white vapor or fine snow escape; the cloth may rupture and the cylinder top is covered with hoar frost. The gas is then turned on again forcibly a number of times until a sufficiently large and firm mass of ice has formed. When this

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is obtained the cloth is icy cold and perfectly hard; the gas is then shut off and the bandage cut away. The ice cylinder and the cloths are frozen together, and the bandages are brittle and must be carefully disentangled to avoid tearing.

Pusey's method is to collect the snow in a cloth, or preferably a chamois skin, and subsequently to compress it into a solid mass with the hands protected by a cloth, and to pare into any desired shape with a knife, or press it into a tubular mold.

These crude methods have since become obsolete through the introduction of an instrument which produces a crayon of suitable shape and solidity in the easiest and most elegant manner.

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### APPLYING ARTIFICIAL HEAT.

Stephen E. Tracy, in the *Journal of the A. M. A.*, points out that, following operation, when the patient is relaxed, the temperature subnormal, and the functional activity of the organs diminished, it is an essential that reaction should be brought about promptly and every means which will promote this result should be employed.

This relaxed abnormal condition of the patient is best overcome by the application of external heat, which is the greatest of all stimulants at this time. Artificial heat is usually applied by placing several hot-water bags about the patient, which is quite sufficient when there is no shock and the temperature is normal. A very small portion, usually the edge of the hot-water bag, comes in contact with the patient, and as a rule the water in the bags is only warm, as the nurses will not use hot water for fear of burning the patient, which means expulsion from most training schools.

In cases in which the patient is weak, advanced in years, or in a septic condition, or in which the operation has been prolonged, or much blood has been lost, or for other reasons there is considerable shock, we have found that the most simple and efficient means of supplying artificial heat is by electricity.

For this purpose we use a frame covered with asbestos, supplied with six or eight 16-candle-power electric lamps, which extends from the shoulders to the feet of the patient. When the patient is returned from the operating room she is wrapped in a blanket, the apparatus is placed over the body, the ends covered with blankets to retain the heat, and the light turned on. In a few minutes the surface of the body is warm, reaction takes place promptly, and, in the large majority of cases, the necessity for hypodermic medication is eliminated.

After ten or fifteen minutes it is usually necessary to turn out one or more lamps, as the amount of heat is excessive and will cause profuse perspiration.

The apparatus is used also in cases in which it is desirable to keep the skin moist, as in renal insufficiency.

The appliance is simple, inexpensive, light and easily moved about, and can be connected to any electric lamp fixture.

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### X-RAY TREATMENT OF LUPUS.

Morris and Dore state that although they have treated the majority of their cases of lupus vulgaris with the Finsen light, the X-rays have mainly been employed as a preliminary in cases in which there was extensive ulceration or considerable œdematous thickening. The effect of the rays in bringing about *rapid healing of ulcers* has in their experience been so marked that we look upon ulceration as a definite indication for their use. Their drying effect is particularly striking. Even one application often causes a notable diminution in the discharge from an ulcerating surface; this fact suggests that extraction of moisture from the part may be an element in the healing properties of the rays. In cases of severe deep ulceration, relatively better results have been obtained than in slight superficial sores. This may be accounted for by the fact that in the deep ulcers little of the lupous growth is

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left and the new tissue is more healthy. When the ulceration is superficial, healing may occur over a mass of deep-seated lupus, and breaking down is more likely to occur. In a case in which there was severe ulceration of the mucous membranes of the lips and corners of the mouth, some improvement followed the continual application of the Finsen light, but permanent healing resulted from a few exposures to the X-rays. In another case a small superficial ulcer of the skin of the neck proved refractory to the light treatment, but the application of the X-rays produced rapid healing. In this instance, however, the healing was not permanent, and the ulcer had eventually to be excised.

*Rapid absorption of oedema* under the influence of the X-rays has been observed in several of the authors' cases. In one in which there was marked œdema and protrusion of the upper lip with ulceration of its under surface and of the gums, the lip regained its normal shape and consistence, and the ulceration healed. In another case with ulceration of the angles of the mouth the upper lip was also tense and protruding, owing to œdema, and the result of treatment with X-rays was equally satisfactory. Improvement also took place in two cases of extensive œdema of both sides of the face, in one of which there was also œdema of the lobes of the ears.

### THE MOTHER'S CRY.

The wind is calling, calling you,
I hear it through all the trees,
Through bough and leaf and twig it steals,
The call of the Wander breeze;
But you must not, must not hear!
Lie still, my babe and rest;
I'll deafen your ears with the call you love,
That throbs in mother's breast.

The sea is drawing, drawing you
With magic and mystic charm.
How can I hold against its might
Who have but a mortal arm?
But you must not, must not go!
My little babe, my own!
Though wind and the night and the pine trees call
You shall not go alone!

The night is taking, taking you
Far out and away from me,
Oh, turn your eyes from beckoning pine,
Your ear from the calling sea!
For you must not, must not die!
How feeble grows each breath!
Oh, God, there's joy in the pain of birth,
But only woe in death!

—*Pall Mall Gazette.*

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# MEDICAL PHARMACY.

## BREAKING AN EMULSION.

BY the "breaking" of an emulsion or its demulsification is understood the complete separation of the emulsified substance from the aqueous vehicle and the emulsifier.

A mere separation of a cream-like layer which does not show free particles of the emulsified substance is not a breaking of the emulsion, since this cream-like layer is only a denser emulsion, and can readily be mixed with the more fluid portion by mere shaking, while a completely broken emulsion can not be thus remixed.

The most common causes of breaking are over-agitation, heating or freezing, the addition of more substance than the emulsifier is capable of keeping in suspension, the addition of foreign substance, or some other agency which decreases the attraction between the emulsifier and the emulsified substance.

Over-manipulation is a frequent cause of breaking. When the emulsion is once perfected, further stirring or agitation can not benefit, and if it has any effect it will be to destroy the emulsion already formed, in the same manner as churning causes the separation of butter from cream. Heating and freezing both tend to destroy emulsions by lessening the adhesion between the emulsifier and the particles held in suspension, or in some other way aiding the attraction between the separated particles as against the attraction of the two different substances for each other.

In like manner the addition of alcoholic liquids, solutions or syrups of mineral salts, glycerin, lycopodium, and of alkaline and acid substances tends to break up emulsions, either by a coagulation of the emulsifier or in some way helping to destroy the balance between the adhesion of the emulsifier and the cohesion of the emulsified substance. When it is necessary, therefore, to add such agents to emulsions, they are always added toward the close of the operation, in small portions, in a state of as great dilution as possible, and with agitation.

## PRESCRIPTIONS CRITICIZED.

The following prescriptions and the criticisms upon them contain valuable lessons in medical pharmacy.

Tinct. digitalis.....f. Z ij
Tinct. ferri chloridi.....f. Z iss
Acidi phosphorici diluti.....f. Z j
Aquæ q. s. ad.....f. Z ij

M. S. Teaspoonful in some water twice a day.

The tannin in the tincture of digitalis makes a black, inky mixture with the tincture of iron. The phosphoric acid added to the tincture of iron before the two tinctures are mixed partially prevents, or if added after partially destroys, the inky color, the final mixture being dark brown and turbid. If two drams of dilute phosphoric acid be added to the tincture chloride of iron the mixture becomes entirely colorless, due to the formation of ferric phosphate, and on the subsequent addition of a tannin solution the black color is not produced. A little light-colored precipitate is formed.

Quininæ sulphatis.....gr. xx
Plumbi acetatis.....gr. xl
Bismuthi subnitratis.....Z ss
Syrupi aurantii cort., q. s. ad.....f. Z iv

M. S. Teaspoonful every four hours.

The quinine sulphate and the lead acetate react, forming quinine acetate and lead sulphate, both of which are practically insoluble in the syrup. The bismuth subnitrate is also insoluble. In filling this prescription it is best to add about twenty grains of powdered tragacanth

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to aid in suspending the insoluble substances. A "Shake well" label should be put on the bottle.

Extracti buchu fl.....f. Z ss
Spiritus ætheris nitrosi.....f. Z j
Potassii acetatis.....Z ij
Syrupi q. s. ad.....f. Z iv

Misce et signa. Teaspoonful half hour after meals.

This mixture is quite frequently prescribed by physicians, even by those who know that it is incompatible. A chemical reaction takes place between the nitrous ether and the tannin in the buchu, causing an evolution of oxides of nitrogen. Spirit of nitrous ether sometimes reacts with an aqueous solution of potassium acetate, giving off a gas, the composition of which has not been definitely determined. The gas must be allowed to escape before corking the bottle. Some of the resinous matter in the fluid extract will be precipitated by the water.

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## A NON-GREASY ANTISEPTIC OINTMENT.

It has been pointed out by Monteil in the *Bulletin Generale de Therapeutique,* that antipyrine, resorcin, and terpin hydrate, when heated together at a suitable temperature, form a product of an oily consistency, which if triturated with glycerin produces a mixture exactly resembling cold cream in consistency and appearance. A sample made in our laboratory showed a beautiful product, perfectly homogeneous, which rubbed into the skin like an easily absorbed ointment. It has an antiseptic and sedative action, is non-caustic, and can be easily washed off the skin with water. The following is the formula:

Antipyrine .....18.8 grammes
Resorcin .....11.0 grammes
Terpin hydrate.....18.0 grammes

Heat together on an oil-bath to 125 degrees C. (270 degrees F.), and add:

Glycerin (previously warmed), 100.0 grammes

and triturate till cold.

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## HEXAMETHYLENAMIN.

Wilfred M. Barton, in the *Monthly Cyclopaedia* for September, reports concerning the effect of hexamethylenamin, especially as to its value in middle ear suppuration, as well as to its elimination in the secretions of the nasal sinuses. The drug is not poisonous, but in man some undesirable effects are known to have occurred. Hematuria is the most common symptom, or complication, and its occurrence does not appear to always coincide with the size of the dose. Albuminuria is rare, and the same is true of skin eruptions. He concludes: (1) Hexamethylenamin is eliminated by the mucous membrane of the middle ear and accessory nasal sinuses. (2) The drug is of service in acute suppurating otitis media, all the patients being apparently rapidly cured. The chronic cases were ameliorated, no absolute cure being noted in a limited number of instances. (3) Upon *a priori* grounds it may be assumed that hexamethylenamin may prove a valuable prophylactic in those diseases commonly attended by otitis media; perhaps also a prophylactic if used prior to surgical operations upon the middle ear or mastoid and the sinuses of the nose.

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## NEW REMEDIES.

ALDOGEN is a disinfectant in which formaldehyde is generated by the action of calcium chloride on paraform in presence of water. One part of paraform, two parts of dry calcium chloride, and three parts of water are the proportions used.

CARBOSANT is the carbonic ester of santalol, and is described as an odorless and tasteless liquid containing 90 per cent. of santalol. It is recommended for gonorrhœa.

CROTALIN is the dried evaporated venom of the rattlesnake. Dissolved in water and glycerin, it is injected in minute doses for tuberculosis, asthma, epilepsy, etc.

DIGESTIN is a digestive ferment prepared in Japan from the okazaki fungus (aspergillus family). It is a fine yellow powder, and is said to possess pow-

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erful digestive properties, acting on milk, fibrin, and starch in acid, alkaline, or neutral media. Dose, 0.1 to 0.3 gramme in water.

ENESOL is a soluble salt of mercury and arsenic. It is given by intramuscular injection in syphilis.

ERGOXANTHEIN is a new active principle of ergot, prepared from the fluid extract of Wenzell (*Amer. Jour. Pharm.*, Sept.). It is an orange-yellow, noncrystalline solid, soluble in alcohol and ether, and has a powerful action on the blood pressure.

EULIMEN is synthetic limonene, recommended to replace oil of turpentine for certain purposes.

FORMOCRESOL is a mixture of equal parts of formalin and cresol, and is used as a dental antiseptic in the treatment of putrescent pulps.

GUAIACOLIN is a syrup of guaiacol, containing 5 per cent. by volume of the latter. It is recommended for the administration of guaiacol to children.

HEGONON is an ammonium albumose compound of silver nitrate containing 7 per cent. of silver. It is soluble in water, and the solution does not coagulate albumen or give a precipitate with sodium chloride. A solution, 1:400, is used in gonorrhœa.

HYCOL is described as a "distilled tar product containing 38 per cent. of phenoloids." It is recommended as a disinfectant for medical and surgical use.

MALTROPON is a combination of the albumin *Tropon* with malt and lecithin. It occurs as a brownish powder, and is recommended as a galactagogue. *Irontropon* is a compound of tropon with iron, recommended as a tonic.

OMNOPON is the English name for *Pantopon*, a preparation of the opium alkaloids; it is put up as powder, tablets (0.1 gr.), and ampoules (1.1 c.c. of 2% solution).

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## PRIMITIVE ORGANOTHERAPY.

There is nothing new under the sun; and the present day propaganda of organotherapy, it seems, had its counterparts in the various ages of the world's history. The recent revival of organotherapy in the treatment of disease has led Dr. Gaudichard to publish in the *Repertoire de Pharmacie* an account of some of the compounds of animal organs used in past ages for the same purpose. Diosorides of Anazarbes, a Greek physician who flourished in the first century, states in his *Materia Medica* that renal disease and dropsy are much benefited by a mixture of honey and dried hedgehog's liver. He also recommends for cough a daily dose of a medicine made up from the lung and palate of a stag, dried in dung and crushed with honey to form a lohock, a preparation of a middle consistence between a soft electuary and a syrup much used at the time on account of its being comparatively pleasant to take. Pliny advised for stomach troubles a paste made from snails, a remedy which still figures in some modern pharmacopœias. The same authority used pig's testicles ground in milk in the treatment of epilepsy. Fox's lung dried and boiled in water yielded a decoction held in much esteem for shortness of breath. Jeoffroy made use of extracts of all kinds of animal organs, which closely resembled those in use at the present time. He administered infusions of liver and heart. For the cure of sterility Joseph du Chesne recommended an extract of ram's testicles made with wine and dried. In his *"Elements of Chemistry"* Jean Biguin states: "The extracts thus specifically named are derived from animals or vegetables by means of solvents or other appropriate ingredients, such as spirits of wine, water, etc." In cases of incontinence of urine Mesue advised the use of a solution in salt or honey of the urinary bladder. Jean de Cuba gave ox spleen mixed with honey in affections of the spleen. Dusseau, who believed that the brain of birds formed a powerful aphrodisiac, added them to egg-yolk and honey.

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# THERAPEUTIC BRIEFS.

**Nasal Scabs.—**

W. P. Porcher, in the *Journal A. M. A.*, reports that large doses of potassium iodide have the effect of opening all the accessory sinuses of the nose and giving free outlet to inflammatory exudates, thus enabling the patient to expel the accumulations. It must be given in increasing doses to a high point.

**Epilepsy.—**

Spangler, in the *New York Medical Journal,* reports the successful use of rattlesnake venom in epilepsy. The dired venom (crotalin), is given hpodermically in solution containing 1-100 grain in 5 minims of water, 4 parts, and glycerine 1 part. The injection is usually made in the forearm, starting with 1-200 grain and gradually increasing, injections being given weekly.

**Chilblains.—**

The following ointment has been found efficacious in broken chilblains:

| | | |
|---|---|---|
| Plumb. acet. | gr. x | 0.6 gramme |
| Camphor | gr. v | 0.3 gramme |
| Ol. cajeputi | gtt. x | 10 drops |
| Ung. acid. carbolic | Zvi | 24.0 grammes |

**Potassium Permanganate Contra-indications.—**

Neumayer, in *Semaine Medicale,* says that the use of potassium permanganate crystals in the treatment of fistulae, abscesses, etc., is contra-indicated when the lesion is in the vicinity of an artery. He has found that its action on the artery walls breaks them down, and leads to hemorrhage.

**Whooping Cough.—**

Zangger, in the *British Medical Journal,* recommends, for combating the infective factor in whooping cough, quinine in the form of a one or two per cent. solution of the hydrochloride in doses of dr. ijss, administered at 8 a. m., 2 p. m. and 6 p. m., and in severe cases also at 11 p. m.

**Seasickness.—**

For short voyages of five to ten hours immunity from sea-sickness may be obtained by taking a sufficient dose of chloral and ammonium bromide to procure five to ten hours of sleep. Thirty grains of each drug in an ounce of chloroform water should be taken an hour before the vessel starts, in which a comfortable sleeping berth should be secured.

**Throat Disinfection.—**

Vincent recommends inhalations four or five times a day, for three minutes at a sitting, of a sufficient quantity of the following mixture in hot water:

| | |
|---|---|
| Iodine | gm. 20 |
| Guiacol | gm. 2 |
| Thymic Acid | cg. 25 |
| Alcohol | gm. 200 |

**Diphtheritic Paralysis.—**

In case of diphtheritic paralysis in which the muscles respond to the faradic current, this form of electricity should be used regularly, and internally the following:

| | |
|---|---|
| Strychnin | gr. j |
| Ac. Phos. Dil. | oz. j |

Sig. Ten drops, ter in die.

**Hemorrhage.—**

Rauzier advises the application of a tampon soaked in a concentrated solution of glycerine to a bleeding surface. The preparation used is as follows:

| | |
|---|---|
| Gelatini Albæ | dr. jss |
| Sodii Chloridi | gr. jss |
| Aquæ | dr. iijss |

The clot which forms after this application is solid and lasting.

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# SOME DOCTORS OF FICTION.

By George Thomas Palmer, M. D.

## III. CHARLES DICKENS, 1812-1870.

Robert Sawyer, Esq., of *Pickwick Papers.*

YOU have finally come to it and it was inevitable. No Book-lover, with a liver entirely free from barnacles, could remain in a library through many dog-day afternoons without turning to Dickens, and no real Dickensonian, in pursuit of lazy, desultory reading, could long keep away from the "Pickwick Papers." We, who delight in visiting the birthplaces of great men, should look upon "Pickwick" with reverence, for the "Pickwick Papers" made Dickens, and Dickens is very much to us all. Of course, if Pickwick had not raised Dickens from comparative obscurity, something else would; but it does not detract from the interest of the birth-place of a great man for us to realize that if he had not been born here, he would have been born somewhere else.

We have picked up a volume of the "Pickwick Papers" without questioning its rank or importance in the work of Dickens. Whether it is better or worse than some of the others, cuts no figure. As Chesterton says, there is no better novel and no poorer novel in all that Dickens wrote—in fact, they are not novels at all—"they are simply lengths cut from the flowing and mixed substance called Dickens—a substance of which any given length will be certain to contain a given proportion of brilliant and of bad stuff."

But we have selected the "Pickwick Papers" in the hope and expectation that Mr. Samuel Pickwick, or some of the members of his illustrious club, will introduce us to a doctor of fiction, and in this we are not to be disappointed. In fact, Mr. Pickwick himself, with the assistance of Mr. Samuel Weller, will describe to us the medic in embryo, and if Bob Sawyer, the medical student, does not appeal to you, it is because you have never been a real medical student yourself. If Mr. Pickwick's conception of the exalted sphere of the medical student does not strike a responsive chord in you, it is because you have never heard a benignant and lovable old gentleman discourse upon the beauties of the medical calling and our opportunities for doing good.

But what's the use? The doctor who has never been a real medical student and the doctor who would not love Mr. Pickwick, would not be in our library on a dog-day afternoon. He would be keeping solitary office hours in his stuffy shop, or "going over his books," with the temperature 100 in the shade.

You will recall that memorable Christmas morning down at the Wardle's. Sam Weller had just brought in Mr. Pickwick's warm water, and had enlightened his master with the news that there were a couple of "sawbones" down stairs. Mr. Pickwick was undecided whether a "sawbones" was a living animal or something to eat, when Sam informed him that a "sawbones" was a surgeon.

"'These here ones as is below, ain't reg'lar, thorough-bred sawbones; they're only in trainin',' remarked Sam.

"'In other words, they're medical students, I suppose?' said Mr. Pickwick. 'I am glad of it. They're fine fellows; very fine fellows, with judgments matured

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by observation and reflection; tastes refined by reading and study. I am glad of it.'

"'They're a smokin' cigars by the kitchen fire,' said Sam.

"'Ah!' observed Mr. Pickwick, rubbing his hands, 'overflowing with kindly feelings and animal spirits. Just what I like to see.'

"'And one on 'em,' said Sam, 'one on 'em's got his legs on the table, and is drinkin' brandy neat, vile the other one—him in the barnacles—has got a barrell o' oysters atween his knees, wich he's a openin' like steam, and as fast as he eats 'em, he takes a aim vith the shells at young dropsy, who's a sittin' down fast asleep in the chimbley corner.'

"'Eccentricities of genius, Sam,' said Mr. Pickwick. 'You may retire.'"

When Mr. Pickwick came downstairs to further investigate the "eccentricities of genius," he found what you and I must acknowledge to be the "commonplace of medical studentdom."

"Mr. Bob Sawyer * * * had about him that sort of slovenly smartness, and swaggering gait, which is peculiar to young gentlemen who smoke in the streets by day and scream in the same by night, call waiters by their Christian names, and do various other acts and deeds of an equally facetious description."

Bob and his boon companion, Benjamin Allen, were busily engaged at breakfast when Mr. Pickwick entered, and after proper introductions by Mr. Wardle, these young limbs of medicine drifted into that line of table talk which has been characteristic of some medical students as far back as my memory goes—and likewise the memory of my revered grandparents.

"'Nothing like dissecting to give one an appetite,' said Mr. Bob Sawyer, looking round the table.

Mr. Pickwick slightly shuddered.

"'By the bye, Bob,' said Mr. Allen, 'have you finished that leg yet?'

"'Nearly,' replied Sawyer, helping himself to half a fowl as he spoke. 'It's a very muscular one for a child's.'

"'Is it?' inquired Mr. Allen carelessly.

"'Very,' said Bob Sawyer, with his mouth full.

"'I've put my name down for an arm ,at our place,' said Mr. Allen. 'We're clubbing for a subject, and the list is nearly full, only we can't get hold of any fellow that wants a head. I wish you'd take it.'

"'No,' replied Bob Sawyer, 'can't afford expensive luxuries. I would not mind a brain; but I couldn't stand a whole head.'"

The conversation was fortunately interrupted by the arrival of the ladies, and we leave these young eccentric geniuses to the holiday festivities with the immortal Pickwickians; but in passing, we may remark that they are much like medical students of our own day, save one degree more civilized than some of them. Mr. Allen referred to a cadaver as a "subject." The student of 1909, who would discuss dissection at breakfast at all, would be quite sure to refer to the human body as a "stiff."

But Mr. Pickwick was interested in the "eccentric geniuses," and Chesterton says that "he would have taken the roof off to drop him into Bob Sawyer's party." Without that effort—merely by the turning of a few pages—we have Bob graduated, "late of Guy's Hospital"—and we are with him and his guests in the little surgery, "late Nockemorf's." Here we find Bob doing just the thing that many a young doctor has done before him and after him; attempting to differentiate between patients and collectors at the door, so that he may pose as the rising young physician if the former, and as a mere office boy, keeping shop in the absence

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of the doctor, in case the visitor chances to be a collector. And you will recall that Bob was distressed that his identity was known to the collector from the waterworks, having pulled a tooth for that official early in his professional career.

Mr. Winkle, of the Pickwick Club, who had called upon Bob, remarked that he had quite a snug little business.

" 'Very,' replied Bob Sawyer. 'So snug that, at the end of a few years, you might put all the profits in a wine glass and cover 'em over with a gooseberry leaf.' "

Now, the carping critic may say that Dickens has made this passage unreal—that it does not sound like the young physician; but I am impressed that even a young doctor has some intimate friends to whom he actually, at times, tells the relative truth regarding the size and condition of his practice.

At this juncture, Bob Sawyer's messenger boy, quite elaborately dressed in grey livery and gold-laced hat, arrived on the scene, and Bob questioned him as to whether he had delivered the "powders to the child at the large house with the new family, and the pills to be taken four times a day to the ill-tempered old gentleman with the gouty legs."

" 'Come,' said Mr. Winkle, on hearing this, 'things are not quite so bad as you would have me believe. There is some medicine to be sent out.'

"Mr. Bob Sawyer peeped into the shop to see that no stranger was within hearing, and leaning forward to Mr. Winkle, said in a low voice: 'He leaves it all at the wrong houses.'

Mr. Winkle looked perplexed, and Bob Sawyer and his friend laughed.

" 'Don't you see?' said Bob. 'He goes to a house, rings the area bell, pokes a packet of medicine without direction into the servant's hand, and walks off. Servant takes it to the dining parlor; master opens it and reads the label: Draught to be taken at bedtime—pills as before—lotion as usual—*the* powder. From Sawyer's, late Nockemorf's. Physicians' prescriptions carefully prepared, and all the rest of it. Shows it to his wife—she reads the label. Next day, boy calls: Very sorry—his mistake—immense business—great many parcels to deliver—Mr. Sawyer's compliments—late Nockemorf.' The name gets known, and that's the thing, my boy, in the medical way. Bless your heart, old fellow, it's better than all the advertising in the world. We have got one four-ounce bottle that's been to half the houses in Bristol, and hasn't done yet.' "

That was the same old game, which was old in the day of Galen, and yet which is ever new, of devising a way to evade the letter of medical ethics in an innocent sort of way. Bob Sawyer would not advertise in a newspaper;—perish the thought!—but he expended a wealth of ingenuity in bringing himself before the public. The tours of the four-ounce bottle were not his only means of publicity;—he was too modern a young medic for that. He cheerfully, even proudly, confesses to the following:

" 'The lamplighter has eighteenpence a week to pull the night bell for ten minutes every time he comes round; and my boy always rushes into church, just before the psalms, when the people have got nothing to do but look around them, and calls me out, with horror depicted on his countenance. "Bless my soul," everybody says, "somebody taken suddenly ill! Sawyer, late Nockemorf, sent for. What a business that young man has"!' "

Thus Bob Sawyer spread his fame—as far as it can be spread by such methods—and that is not an inconsiderable distance. If not, why are as obvious advertising methods in vogue to-day? But we wander.

It has been said that one of the worst features of idleness in the early years of medical practice, is that it tends toward the establishment of bad habits which

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are not easy to break in later years. Incidentally, the dissipations of the young physician land him in very embarrassing positions, more embarrassing than in the case of any other class of young men. The time that the embryo medic is least fit to appear in public, is generally the time that the suffering public finally discovers that it wants him. Many a sporty young medic has learned this to his sorrow and mortification.

"After dinner, Mr. Bob Sawyer ordered in the largest mortar in the shop, and proceeded to brew a reeking jorum of rum punch therein; stirring up and amalgamating the materials therein with a pestel in a very creditable and apothecary-like manner."

There was but one glass and that was given to Mr. Winkle; Ben Allen drank out of a graduate and Bob used a funnel with a cork in the end. There was no singing with the rum punch, for Bob declared it wasn't professional, but there was laughter and conversation which could have been heard to the end of the street.

Just at that stage, when the mortar was nearly empty; when Bob Sawyer's mirth was waving furious; when Ben Allen was "relapsing into the sentimental"—a young woman arrived to say that Sawyer, late Nockemorf, was wanted directly, a couple of streets off.

"Mr. Bob Sawyer, understanding the message, after some twenty repetitions, tied a wet cloth round his head to sober himself, and, having partially succeeded, put on his green spectacles and issued forth."

If this scene was interesting and edifying to Mr. Winkle, how much more was a similar situation to be appreciated by the immortal Pickwick himself, for the head of the Pickwick Club, you will recall, was deeply impressed with the seriousness of medical students and was deeply interested in the eccentricities of genius. You will also recall, perhaps, that Mr. Pickwick attended a party given by Bob Sawyer, and there met Mr. Jack Hopkins, another medical student, whose conversation merits some attention.

"A heavy footstep was heard upon the stairs, and Jack Hopkins presented himself. He wore a black velvet waistcoat with thunder-and-lightning buttons, and a blue striped shirt with a white false collar.

"'You are late, Jack,' said Mr. Benjamin Allen.

"'Been detained at Bartholomew's,' replied Hopkins.

"'Anything new?'

"'No: nothing particular. Rather a good accident brought into the casualty ward.'

"'What was that, sir?' inquired Mr. Pickwick.

"'Only a man fallen out of a four pair of stairs window; but it's a very fair case,—very fair case, indeed.'

"'Do you mean that the patient is in a fair way to recover?' inquired Mr. Pickwick.

"'No,' replied Hopkins carelessly. 'No, I should rather say he wouldn't. There must be a splendid operation, though, to-morrow,—magnificent sight if Slasher does it.'

"'You consider Mr. Slasher a good operator?' said Mr. Pickwick.

"'Best alive!' cried Hopkins. "Took a boy's leg out of the socket last week,—boy ate five apples and a ginger-bread cake. Exactly two minutes after it was all over, boy said he wouldn't lie there to be made game of; and he'd tell his mother if they didn't begin.'

"'Dear me!' said Mr. Pickwick, astonished.

"'Pooh! That's nothing,—that ain't,' said Jack Hopkins. 'Is it, Bob?'

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"'Nothing at all,' replied Mr. Bob Sawyer.

"'By the bye, Bob,' said Hopkins, with a scarcely perceptible glance at Mr. Pickwick's attentive face, 'We had a curious accident last night. A child was brought in who had swallowed a necklace.'

"'Swallowed what, sir?' interrupted Mr. Pickwick.

"'A necklace,' replied Jack Hopkins. 'Not all at once: you know that would be too much. You couldn't swallow that, if the child did, eh, Mr. Pickwick? Ha! Ha!'

"Mr. Hopkins appeared highly gratified with his own pleasantry, and continues, 'No, the way was this: Child's parents were poor people who lived in a court. Child's eldest sister bought a necklace,—common necklace, made of large, black wooden beads. Child, being fond of toys, cribbed the necklace, hid it, played with it, cut the string, and swallowed a bead. Child thought it capital fun; went back next day, and swallowed another bead.'

"'Bless my heart,' said Mr. Pickwick, "what a dreadful thing! I beg your pardon, sir. Go on.'

"'Next day, child swallowed two beads; the day after that, he treated himself to three; and so on, till in a week's time he had got through the necklace,—five and twenty beads in all. * * A few days after, the family were at dinner; the child, who wasn't hungry, was playing about the room, when suddenly there was heard a devil of a noise, like a small hail-storm. "Don't do that, my boy," said the father. "I ain't a-doin' nothin'," said the child. "Well, don't do it again," said the father. There was a short silence, and then the noise began again, worse than ever. * * * The father gave the child a shake to make him obedient; and such a rattling ensued as nobody ever heard before. "Why, damme, it's in the child!" said the father. "He's got the croup in the wrong place!" "No, I haven't, father," said the child, beginning to cry. "It's the necklace: I swallowed it, father." * * * 'He's in the hospital now,' said Jack Hopkins; 'and makes such a devil of a noise when he walks about, that they're obliged to muffle him in a watchman's coat, for fear he should wake the patients.'"

There is an example of the fine art of case-history taking as taught at Bartholomew's in the day of Pickwick.

And such are the "eccentricities of genius" which so interested the lovable and gullible Samuel Pickwick, and of such are the eccentricities of genius of the young medic of to-day.

Bob Sawyer "put on his green spectacles and issued forth"—put them on to give him an appearance of superior wisdom—to cover a pair of eyes which could not otherwise conceal a twinkle of boyish exuberance, however hard Bob tried. We don't use green goggles to-day. We do our acting without a mask. But quite as obvious as the goggles is that look of deep thought which is quite habitually worn, not alone by the young, but by many of the older doctors of to-day, when they issue forth on their professional duties.

### Other Doctors of Dickens.

But Dickens did not content himself with presenting to us only the doctor in the making and the doctor newly made. With his infinite versatility in the art of caricature, he drew numerous pictures of numerous doctors of widely different traits and characteristics. If we will pull our chair a little nearer the book-case, so that we will not have to move in picking up the various volumes, we may

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assemble about us as quaint and interesting a group of the medical profession as was ever gathered together.

In the "Sketches by Boz" (1836) we are permitted to meet Dr. Wosky, Mrs. Bloss' physician—"a little man with a red face,—dressed of course in black, with a stiff white neckerchief. He had a very large practice, and plenty of money, which he had amassed by invariably humouring the worst fancies of all the females of all the families he had ever been introduced into."

Dr. Wosky employed a method of treatment which is by no means unknown at the present time, and which is admirably adapted to the requirements of those who enjoy poor health and who are financially able to afford it. He dieted Mrs. Bloss on Guiness stout and lamb chops, with a liberal general diet thrown in, and admonished her, under all circumstances, to have her breakfast in bed.

"'We must take stimulants,' said the cunning Wosky, 'plenty of nourishment, and above all, we must keep our nerves quiet; we positively must not give way to our sensibilities. We must take all we can get,' concluded the doctor as he pocketed his fee, 'and we must keep quiet.'

"'Dear man!' exclaimed Mrs. Bloss, as the doctor stepped into his carriage.

Of course she said "dear man." He was faithfully assisting her in the facinating game of chronic invalidism, in which a more honest and conscientious physician would have been an intolerable nuisance. I have met you often, Dr. Wosky, and I greet you as an old friend!

Of Dr. Slammer, surgeon of the Ninety-seventh Regiment, who demanded satisfaction of poor Mr. Winkle, of the Pickwick Club, on account of the actions of the irrepressible Mr. Jingle, who had secretly worn Mr. Winkle's Pickwickian suit at the charity ball, we need say nothing. Slammer is shown to us as an irate and blood-thirsty lover, and not as a doctor at all.

In distinct contrast with either of the two men of medicine just mentioned, we find Mr. Losberne, in "Oliver Twist" (1837-1839). He was "a surgeon in the neighborhood, known through a circuit of ten miles round as 'the doctor,' had grown fat, more from good humor than from good living: and was as kind and hearty, and withal as eccentric an old bachelor, as will be found in five times that space, by any explorer alive." He is not shown to us deeply engaged in his professional pursuits; but we cannot resist the conviction that he is the kind of stuff that good and comfortable doctors are made of.

If we were disappointed in not finding Mr. Losberne at his post of duty, we are not so when we meet Mr. Lumbey, in "Nicholas Nickleby" (1838-1839)—in fact, the good Lumbey is working over-time. For we find the doctor "dandling the baby—that is, the old baby—not the new one," and aside from this useful occupation, he devotes himself skilfully to the congratulation of Mr. Kenwigs on the arrival of a son.

"'It's a fine boy, Mr. Kenwigs,' said Mr. Lumbey, the doctor.

"'You consider him a fine boy, do you, sir?' returned Mr. Kenwigs.

"'It is the finest boy I ever saw in all my life,' said the doctor. 'I never saw such a baby.'

"'Morleena was a fine baby,' remarked Mr. Kenwigs; as if this was rather an attack, by implication, upon the family.

"'They were all fine babies,' said Mr. Lumbey. And Mr. Lumbey went on nursing the baby with a thoughtful look. Whether he was considering under what head he could best charge the nursing in the bill, was best known to himself."

Dr. Lumbey "was a stout bluff-looking gentleman, with no shirt-collar to speak of, and a beard that had been growing since yesterday morning; for Dr.

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Lumbey was popular, and the neighborhood was prolific; and there had been no less than three other knockers muffled, one after the other, within the last forty-eight hours"—and yet he sat "in the first floor front, nursing the deposed baby" and talking most amiably to Mr. Kenwigs. Quite naturally, the women of the neighborhood, who had assembled to see the new boy and, incidentally to sip brandy and water, unanimously declared "that there never was such a skilful and scientific doctor as that Doctor Lumbey."

And Dickens, in showing us the doctor in all his phases, has not overlooked the medical officer, or the "chief medical examiner," if you please, of the great insurance company. Such an oversight on Dickens' part would have been an oversight indeed, and Dickens was not in the habit of overlooking good material for his caricaturing pen.

In "Martin Chuzzlewit" (1843-1844), that novel which has sunk so deeply into the sensibilities of loyal Americans, we are introduced to Dr. John Jobling, of the Anglo-Bengalee Disinterested Loan and Life Insurance Company. In his greetings to Mr. Montague, we see what a comfortable sort of fellow-practitioner he is:

"'And how are you, Mr. Montague, eh?' said the Medical Officer, throwing himself luxuriously into an easy chair, and taking a handsome gold snuff-box from the pocket of his black satin waistcoat. 'How are you? A little worn with business, eh? If so, rest. A little feverish from wine, humph? If so, water. Nothing at all the matter, and quite comfortable? Then take some lunch. A very wholesome thing at this time of day to strengthen the gastric juices with lunch, Mr. Montague."

Dr. John Jobling was one of those clever fellows—and they are not all dead yet, who waxes fat upon the side-lines of medicine—who engage in ventures, a little questionable perhaps, which present themselves to shrewd practitioners of large practice and wide acquaintance, and which offer rich returns with no other outlay or responsibility for success or failure of the enterprise, than lies in permitting their names to appear on letter heads and printed matter. That in so permitting his name to be employed, he is aiding in duping those who have placed confidence in him in the past and at a time, when, as their physician, they were very susceptible to his advances, would be stoutly denied both by Dr. Jobling and by the host of Joblings we still have among us.

"In certain quarters of the City and its neighborhood, Mr. Jobling was * * a very popular character. He had a portentiously sagacious chin, and a pompous voice, with a rich huskiness in some of its tones that went directly to the heart, like a ray of light shining through the ruddy medium of choice old burgundy. His neckerchief and shirt-frill were ever of the whitest, his clothes of the blackest and sleekest, his gold watch-chain of the heaviest, and his seals of the largest. His boots, which were always of the brightest, creaked as he walked. Perhaps he could shake his head, rub his hands and warm himself before a fire, better than any man alive; and had a peculiar way of smacking his lips and saying 'Ah!' at intervals while patients detailed their symptoms, which inspired great confidence. It seemed to express, 'I know what you are going to say better than you do; but go on, go on.' * * * His female patients could never praise him too highly; and the coldest of his male admirers would always say this for him to their friends, 'that whatever Jobling's professional skill might be (and it could not be denied that he had a very high reputation), he was one of the most comfortable fellows you ever saw in your life!'"

Dr. Jobling, as has been intimated, held his lucrative connection with the

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Anglo-Bengalee Company on account of his intimate acquaintance with tradespeople and their families—the kind of people the Company had selected as the most promising investors and as the purchasers of its insurance policies; but Jobling was too shrewd to permit any of his constituents to believe that he was in any way responsible for the concern or its operations. In talking to his patients about the insurance organization which employed him, the doctor would answer in this wise:

"'If you put any question to me, my dear friend, touching the responsibility or capital of the company, there I am at fault, for I have no head for figures, and not being a shareholder, am delicate of showing any curiosity whatever on the subject. Delicacy—your amiable lady will agree with me, I am sure—should be one of the first characteristics of a medical man.' (Nothing could be finer or more gentlemanly than Jobling's feeling, thinks the patient.)"

Let us pass quickly over Mr. Lewsome (also of "Martin Chuzzlewit"), with the assurance that he is not one of our guild. He was bred a surgeon, to be sure, and was employed as an assistant to a general practitioner of London; but he was not in practice when we knew him and we are glad to disclaim him if we can. It was he, you will recall, who, being indebted to Jonas Chuzzlewit, sold him the drugs with which old Anthony Chuzzlewit was poisoned, although suspecting the purpose for which the drugs were purchased. That he made a voluntary confession of his guilt, after the old man had died, and when he was moved by fear of fatal illness, does not in any way restore him to the companionship of reputable medical men. We may admit to our guild the irresponsible fledglings like Bob Sawyer, clever imposters like Dr. Wosky, pugilistic and blood-thirsty surgeons of the type of Dr. Slammer, genial obstetricians like Dr. Lumbey, beloved country doctors like Mr. Losberne, and even shrewd old tricksters of the type of Dr. Jobling; but we must draw the line somewhere, and we choose to draw it upon Mr. Lewsome.

But in the very first chapter of "Dombey and Son" (1846-1848) we come in contact with a distinguished gentleman concerning whom there cannot be the slightest question. He will be eligible in any assemblage of medical dignitaries in any part of the civilized world—I refer to Dr. Parker Peps, one of the Court Physicians. This gentleman was called by Mr. Dombey to preside at the birth of little Paul, for the advent of the junior member of the firm of Dombey and Son was a matter of no little moment and commercial importance. In the picture which Dickens paints of Dr. Peps, however, there is nothing more interesting or realistic than the deference shown him by the family surgeon—a deference which we not infrequently see accorded to the pompous consultant from the city, by the honest, hard-working, conscientious family physicians of the outlying districts. And Dickens paints it in all its ridiculousness. I have, in my day, been a groveling satellite, and the following is exceedingly refreshing to me:

"Dr. Parker Peps, one of the Court Physicians, and a man of immense reputation for assisting at the increase of great families, was walking up and down the drawing-room, with his hands behind him, to the unspeakable admiration of the family Surgeon, who had regularly puffed the case for the last six weeks, among all his patients, friends and acquaintances, as one to which he was in hourly expectation, day and night, of being summoned, in conjunction with Dr. Parker Peps."

And what can be more delightful than the keen shots which Dickens takes at the distinguished consultant—his patronizing manner to the family physician; his tendency to confuse the name of the present patient with those of prominent

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women attended by him in the past; his evasion as to the prognosis in the case—to be found in the following lines:

"'Good! We must not disguise from you, Sir,' said Dr. Parker Peps, 'that there is a want of power in Her Grace the Duchess—I beg your pardon; I confound names; I should say, in your amiable lady. * * * It would appear that the system of Lady Cankaby—excuse me; I should say of Mrs. Dombey; I confuse the names of cases——'

"'So very numerous,' murmured the family practitioner—'can't be expected, I'm sure—quite wonderful if otherwise—Dr. Parker Peps' West-End practice——'

"'Thank you,' said the Doctor. 'Quite so. It would appear, I was observing, that the system of our patient has sustained a shock, from which it can only hope to rally by a great and strong——'

"'And vigorous,' murmured the family practitioner.

"'Quite so,' assented the Doctor—, 'and vigorous effort. Mr. Pilkins here, who from his position of medical adviser in this family—no one better qualified to fill that position, I am sure.'

"'Oh!' murmured the family practitioner. 'Praise from Sir Hubert Stanley!'

"'You are good enough,' returned Dr. Parker Peps, 'to say so. Mr. Pilkins, who, from his position, is best acquainted with the patient's constitution in its normal state (an acquaintance very valuable to us in forming our opinions on these occasions), is of the opinion, with me, that Nature must be called upon to make a vigorous effort in this instance; and that if our interesting friend the Countess of Dombey—I beg your pardon; Mrs. Dombey—should not be——'

"'Able,' said the family practitioner.

"'To make the effort successfully,' said Dr. Parker Peps, 'then a crisis might arise, which we should both sincerely deplore.'"

Could the distinguished Dr. Peps be held responsible if poor Mrs. Dombey died? By no means! Had he not laid the matter plainly before Mr. Dombey, and shown that the outcome of the case rested entirely upon the ability of either the patient or Nature to make the effort? After such foresight, such frankness and such clearly expressed warning, Dr. Peps could certainly wash his hands of the whole affair. He had vindicated his position with the family, and, by his outspoken praise of Mr. Pilkins, had assured the retention of that gentleman's "consultation patronage" for all time to come.

But what is that wonderful power of Dickens, possessed to so great an extent by no other man who ever wrote, through which he is able to wreathe our faces in smiles, and almost at the same moment to wet our lashes with tears? After the clever caricature of Dr. Peps, we feel that we can never take him seriously—that no scene could ever be impressive in which he takes a part. And yet, after a few brief paragraphs, we come to these, which have always touched me:

"'The two medical attendants exchanged a look across the bed; and the Physician, stooping down, whispered in the child's ear. Not having understood the purport of this whisper, the little creature turned her perfectly colorless face and deep-set eyes towards him; but without loosening her hold in the least.

"The whisper was repeated.

"'Mama!' said the child.

"The little voice, familiar and dearly loved, awakened some show of consciousness, even at that ebb. For a moment, the closed eyelids trembled, and the nostrils quivered, and the faintest shadow of a smile was seen. * * * The Doctor gently brushed the scattered ringlets of the child aside from the face and mouth of the mother. Alas, how calm they lay there; how little breath there was

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to stir them! Thus, clinging fast to the slight spar within her arms, the mother drifted out upon the dark and unknown sea that rolls round all the world."

As Dickens required such a host of characters to give play to his remarkable faculty of character drawing, it is natural that he should be compelled to produce them and, as a result, the accoucher was quite indispensable to him. In fact, the Dickens doctors, in most instances, seem to run to obstetrics,—although Mr. Chillip, who presided at the birth of "David Copperfield," could hardly be said to run to anything.

When we know the good Chillip better, we are not surprised that the presence of so vigorous a woman as Miss Betsy Trotwood almost "caused him to lose his presence of mind."

"He was the meekest of his sex, the mildest of little men. He sidled in and out of a room to take up the less space. He walked as softly as the ghost in 'Hamlet,' and more slowly. He carried his head on one side,—partly in modest depreciation of himself, partly in modest propitiation of everybody else. It is nothing to say that he hadn't a word to throw at a dog. He couldn't have thrown a word at a mad dog."

Bless his heart! I have known him, and there are many worse traits than this timid modesty! You may recall that Dr. Jobling regarded delicacy as an essential to the physician,—yet modesty is quite as rare and quite as desirable a virtue. While there is no pretense about Mr. Chillip, there is nothing to indicate that David Copperfield was not ushered into the world by the most approved methods of midwifery,—and when Mr. Chillip gave us David, he placed all of us deeply in his debt.

Most of the doctors of Dickens are burlesque sketches which might have been inspired by the medical men of the present day as well as by those of Dickens' own time; but one stands unique, the result of the writer's peculiar inventive genius. This is Mr. Bayham Badger, whom we are permitted to meet in "Bleak House" (1852). Dickens was accustomed to mark his actors with some very characteristic trait or mannerism by which they were instantly recognized wherever we chanced to meet them, and Mr. Badger was noted principally for his enthusiastic admiration of his wife's former husbands.

"Mr. Bayham Badger * * * was a pink, fresh-faced, crisp-looking gentleman with a weak voice, white teeth, light hair and surprised eyes,—some years younger, I should say, than Mrs. Bayham Badger. He admired her exceedingly, but principally, and to begin with, on the curious ground (as it seemed to us) of her having had three husbands."

But, like our good friends, Dr. Slammer and Mr. Losberne, we find Mr. Badger occupied with other things than medicine, and so we pass him by.

Young Allan Woodcourt, of whom we are permitted to know very little, gave us promise of a delightful companionship. He was starved out of London when his professional skill was just beginning to be recognized, and he remained a surgeon on a ship trading in India and China during most of those happy days when we were wandering through the pages of "Bleak House" and were fathoming the intracacies of the case of Jarndyce and Jarndyce.

Do you recall ever having drifted into a strange town and, in some unexpected way, having stumbled upon an old schoolmate whom you have not seen for years? Do you recall the flood of memories opened up by such a meeting, and the keen pleasure of talking over old times? And does it ever occur to you how inaccurate the memory of your old friend has grown and how he is inclined to exaggerate certain incidents and minimize others that, to you, are more important? If so,

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pick up the "Uncommercial Traveler" (1860) and step with Dickens into the "half study and half surgery" of Dr. Joe Specks. You will find little of medicine there; but much which will warm the cockles of your heart, especially when you learn that Joe has married little Lucy Green, she of the face that "had once looked down upon you into the fragrant dungeon of Seringapatam."

And now let us adjourn to the meeting of the "Mudfog Association for the Advancement of Everything," where we will see the wit and sarcasm and satire of Dickens run riot. The reports of the meetings of the Association appeared in 1837 and 1838—an effort of the author to satirize the British Association for the Advancement of Science—and the effort was brilliantly successful. As is customary at our own medical meetings, you may choose the section you will attend, and whether you elect Section C, which is given over to Anatomy and Medicine, or Section E, devoted to Umbugology and Ditchwateristics, you will be equally interested and delighted. Our pathologists will observe with pleasure the wax preparation presented by Sir Knight Bell, showing the interior of a man who had swallowed a key, the impression of which was so clearly defined on the coating of his stomach that a new key was made from it and used by a dissipated medical student in entering and robbing the deceased gentleman's house. You will keenly enjoy Dr. Buffer, Dr. Grummidge, Professor John Ketch, Dr. Kutankumagen, Dr. Neeshawts, Professor Muff, Mr. Tickel, Dr. Toorell and Dr. Soemup. And while it may appear to you that even the wit of Dickens may be strained at times, when overpressed for something amusing, you will see that there is a broad field for satire in even some of the most pretentious medical organizations of the present day. To Dickens, and to most men whom God has blessed with a sense of humor, pomposity and great dignity are ever sources of amusement, and the most loyal of us cannot deny that the medical profession has its full allowance of affectation of importance and of deep thought and knowledge.

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## LIGHT ABSORBED BY PAPER AND HANGINGS.

A late issue of *Die Bauwelt* says the color of paper hangings and tapestry is far from being a factor of minor importance in the degree of light that prevails in a room, and is very closely related to the economic use of artificial illumination also. In accordance with their color, such fabrics throw back into the room a part of the light that is falling upon them while they annihilate another part, or absorb it, as the technical phrase is. As the power of absorption of light rises in such a fabric, so naturally in less degree is the room brightened and less advantageous is the use of artificial illumination, a part of the money spent for the latter being wasted for light annihilated by the hangings.

The latest investigation reveals that the absorption of light depends, in the first instance, on the color of the hangings, and therefore on the same color when the walls are painted with it, too. Naturally the most favorable effect of color in this regard is afforded by the white hangings and paints, but even these absorb 50 per cent. of the light falling upon them, while the other 50 per cent. radiates back into the room. Following these in the effect of light come the yellow hangings, which radiate 45 per cent, and annihilate 55 per cent. The next in order are the bright green, of which the power of absorption rises to 60 per cent., while 40 per cent. of the light striking them is thrown back. Dark green and red hangings exercise precisely the same influence; they annihilate quite 85 per cent., only 15 per cent. radiating from them.

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# BOOK REVIEWS.

THE PHYCICIAN'S VISITING LIST (Lindsay and Blakiston's) for 1911. Sixtieth Year of its Publication. Dose Table Revised in Accordance With New U. S. Pharmacopeia. Philadelphia: P. Blakiston's Sons and Company.

With the present issue The Physician's Visiting List enters upon the 60th year of its existence. Only those publications of decided merit outlive the generation with which they were born and by far the larger number disappear after a few years of struggling existence. During the life of this book medical science has made greater progress than during the preceding five hundred years. It has been seen and used by the most famous of American physicians and investigators, as well as by thousands of others whose names perhaps were never known beyond their own local scenes but who nevertheless have done a large share toward the total sum of human happiness. It has made long journeys in the buggy or saddle bags of the country doctor. It has been at the birth and alongside the deathbed of rich and poor, famous and infamous alike. Its volumes hold the life records of numberless practitioners.

The publishers take great pride in its stability; they recognize in its success an appreciation of sixty years of effort on their part to provide a useful book and they realize the help and encouragement that has been given them by the profession for whom it is intended.

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THE PRACTITIONER'S VISITING LIST. 1911. Records of Practice for Thirty Patients per Week. Philadelphia and New York: Lea and Febiger.

This is another of the visiting and record books that have attained a national reputation. In addition to the ruled pages set apart for the patient's accounts, there are separate sections for records of obstetric cases and engagements, vaccinations, birth and deaths, and a whole fund of miscellaneous reference and emergency information, including a list of poisons and their antidotes, a complete table of drug remedies and their dosage, an alphabetical index of therapeutic reminders, and a description of the technique for ligating various arteries. So that it is much more than a mere visiting account book; it is a *vade mecum* for the busy practitioner. The physical qualities of the book are all that could be desired. It is strongly and handsomely bound in red morocco, with a folding flap, and printed on excellent paper. It holds its own with the best of this type of book, and maintains the high standard set by itself.

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LESSONS ON THE EYE. For the Use of Undergraduate Students.—By Frank L. Henderson, M. D., Chairman of the Ophthalmological Section of the St. Louis Medical Society; Ophthalmic Surgeon to St. Mary's Infirmary; Consulting Oculist to the Wabash Railway, etc. Fourth Edition, Revised Philadelphia: P. Blakiston's Son and Company. 1910.

As its title implies, this little book is intended for the help of the medical student in his endeavors to master the somewhat intricate anatomy and physiology of the vision; but it must be confessed that there are hundreds of graduate physicians who are almost as unsophisticated as the college student in matters pertaining to this branch of medical knowledge, and the fact that the book has reached a fourth edition testifies to the use made of it by this wider class of medical men. Then the reviewer has reason to know that its circulation extends outside the medical profession altogether, and affords valuable

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and helpful reading to all who are in any direct or indirect way interested in the structure and function of the human eye. So, altogether, the book has enjoyed quite a wide popularity among a varied class; and it deserves it, for it is a very succinct and simple presentation of what we have already admitted to be a rather difficult subject, and books that perform a service of that character are always welcome, always find a large and appreciative circle of readers. We cordially commend Dr. Henderson's little book to all who wish to acquire an elementary, working knowledge of the eye, its functions, and its disorders.



THE PHYSICIANS' POCKET ACCOUNT BOOK. By J. J. Taylor, M. D. 212 pages. Leather. Price $1.00 postpaid. J. J. Taylor, Publisher, 4105 Walnut St., Philadelphia, Pa.

The especial feature of this book is a system of accounts whereby each transaction can be recorded in a moment's time in plain language, so that it is strictly legal as evidence in court without personal explanation, and so arranged that any patron's account can be ascertained on demand without any posting. There is only one entry of each transaction, and this in such a form that no posting is ever required. It saves time, labor and worry, and insures that your accounts are always up to date, so that you can send statements out every month without any delay and can inform any patron, wherever you may meet him, of the exact state of his account. This feature alone in the course of a year will secure payments that would otherwise be missed—sufficient to buy account books for a whole lifetime. It is one of the simplest, quickest and easiest account systems on the market.

The book also has some easy and practical directions for billing and collecting, some excellent business and legal hints, some valuable forms for emergency use, such as "dying declarations," "form for wills," etc., an average medical and surgical fee bill, besides miscellaneous tables, clinical directions, etc. Having a good cash account department and various clinical records—vaccinations, deaths and confinements—it forms a complete year book for the physician's pocket.

For those who prefer to keep their accounts at the desk, the same system has been enlarged into a desk size book of 400 large-sized pages, the price of which is only $5.00 per copy.



THE PREVENTION OF SEXUAL DISEASES. By Victor C. Vecki, M. D., Ex-President, San Francisco German Medical Society; Member, American Urological Society, etc. With Introduction by William J. Robinson, M. D. The Critic and Guide Company, 12 Mt. Morris Park West, New York. 1910.

The book is a very frank and earnest presentation of the case for the regulation of the venereal evil. The author is impressed, as he himself states in his *nachwort,* with the enormity of the damage done to humanity by contagious sexual disease, and he believes the question of the prevention of venereal disease is not receiving the attention that its importance demands. He thinks that hypocrisy and prudery have muddled all social questions, including the sexual question. He frankly and urgently advocates universal instruction in sexual and venereal matters. The truth, he says, must be told to everybody—to children to begin with. And it must be confessed that Dr. Vecki does his share in the telling of it. We do not know that there is anything in the book that has not been said before. But such things need reiteration: and at least there is a breeziness and a virulence about Vecki's way of saying these old truths that almost makes them new—which at least makes them live. The book will doubtless serve to stir up someone's sleeping or flagging zeal in the sexual crusade.

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# NOTES AND MISCELLANY.

### SOME POSOLOGICAL HINTS.

Under this title the manufacturers of Fellows' Compound Syrup of Hypophosphites have put out an excellent little pamphlet, containing many useful hints and much valuable information, gleaned from experience and observation, upon practical points in pharmacology and therapy. Absorption and elimination of various commonly-used drugs, incompatability, diuretics and cathartics, with a special classification of the topographical action of the latter, a table of overdose symptoms, a tubercular dietary, and several other equally handy matters of reference, comprise the contents of this exceedingly useful little book. We understand that it is being sent out broadcast among the members of the medical profession, and we are sure it will be highly appreciated by every busy practitioner, and will redound to the praise of the Fellows company. We wish that we had been the thoughtful authors of so valuable a booklet—how can we better express our opinion of it?

### SOMETHING NEW.

In these days of progress it is hard to keep up with the procession and harder still to believe all that the eager manufacturer has to say about his goods. After all, the great test is results, and nothing can be more convincing than this test.

One of the latest additions to the therapeutic armamentarium of the up-to-date physician is a solution perfected by William Bannerman, of Chicago, after twenty years of work upon animals. Bannerman's solution has secured, does secure and will secure results that are remarkable—these results may easily be yours. Read the announcement on page 5.

### USEFUL REMEDY FOR THE HEART.

"The great bulk of clinical evidence leaves no doubt that Cactina Pillets is an eminently useful remedy for the heart when properly indicated and properly applied. At any rate, the wealth of facts gleaned from practical bedside experience cannot fail to stimulate the interest of every open-minded physician who is striving constantly to accomplish the best possible results in the best possible way."

### DISEASES OF WOMEN.

"In disordered conditions of the liver, indigestion, intestinal atonicity and neurasthenia, the effects of Prunoids is most beneficial. In diseases of women, particularly those occurring at puberty or the climacteric, and in connection with the menstrual function, Prunoids are markedly efficient as a safe and thorough laxative."

### A RESTFUL BINDER.

There is one very important thing that can be said about the Storm "Abdominal Binder" that will commend it at once to every physician, and that is, it never makes a patient nervous. On the contrary, it is common to have patients declare how rested and relieved they feel from wearing "Storm" Binders, even though they are not conscious that they are on. So many abdominal binders, appendicitis belts, etc., keep patients constantly fretted by the sense of "being harnessed and saddled," as one bright woman described it, that it is a pleasure to recommend the "Storm" Binder with its absolute avoidance of unpleasant or "harness-like" effect. The Storm Binder is the last word in abdominal supports and the medical profession has been quick to note its superior advantages.—*American Medicine.*

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### INFLUENZA—Pertinent Thoughts

With each succeeding visitation of this trouble, we have found it more and more necessary to watch out for the disease in disguise, and to treat these abnormal manifestations; consequently we have relied upon mild nerve sedatives, anodynes and heart sustainers, rather than upon any specific line of treatment. Most cases will improve by being made to rest in bed and encouraging action of skin and kidneys with possibly minute doses of blue pill or calomel. We have found much benefit from the use of antikamnia and codeine tablets in the stage of pyrexia and muscular painfulness and as a sedative to the respiratory centres. In the treatment of influenza or la grippe and its sequelæ, its value is highly esteemed. In diseases of the respiratory organs following an attack of la grippe, pain and cough are the symptoms which especially call for something to relieve. This combination meets these symptoms, and in addition, controls the violent movements accompanying the cough. To administer these tablets in the above conditions, place one tablet in the mouth, allowing it to dissolve slowly, swallowing the saliva.

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### HOW TO PRESCRIBE.

The importance of therapeutic knowledge, more especially of the therapeutic use of drugs, is insisted on by H. T. Hemenway in the *Journal A. M. A.* It often happens that a physician may be successful in his practice while relatively ignorant in the fields of bacteriology, blood analysis, and other refinements of diagnosis, while his neighbor, who is an expert pathologist, may be almost an utter failure. Too little attention is given, Hemenway says, to drug therapy in medical college instruction and by practitioners generally. He gives illustration from practical life in regard to these points. The necessity of uniformity of drug strength and exactness of doses is emphasized, and the present pharmaceutical chaos condemned. There are too many elements of uncertainty in drug therapy at the present time and they are too little recognized. Hemenway condemns the use of ready-made mixtures and gives illustrations of how prescribed mixtures may fail through the ignorance of the prescriber. The deterioration of drugs is also to be considered and physicians are not so likely to detect drug errors as pharmacists, at least errors of certain kinds. The variations of drug action according to the method of administration is also mentioned. In conclusion Hemenway speaks of the object of the present propaganda for reform in these matters, namely, the making of drug therapy more scientific.

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### GUARDING AGAINST PREMATURE BURIAL.

A correspondent of the *Lancet* puts the interesting query as to what is the general routine to follow when asked by patients to promise to see that after death they do not run the risk of premature burial. Of course, one naturally promises, and when the time arrives satisfies one's self that death has really occurred. But the patient, in exacting the promise, often speaks of cutting blood-vessels, puncturing the heart, etc., and the correspondent wants to know what is generally done, under the circumstances.

The *Lancet* thinks it is certainly advisable that the medical man, before practicing such operations upon a dead patient, should receive, from the patient, testamentary or written directions as to the course to be pursued. It does not consider a general request to see that premature burial does not occur entails upon the medical man the performance of any operation. It is sufficient that the medical man should satisfy himself in the usual way that the patient is dead.

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### A DISAPPOINTING CANDIDATE.

In these days of political promises and political platforms—which someone has aptly said are, like train platforms, "only for purposes of getting in"—the following letter written by an indignant constituent to an Australian member of Parliament may prove both interesting and profitable:

"DEER SUR,—You're a dam fraud, and you know it. I don't care a rap for the billet or for the muney either, but you could have got it for me if you wasn't as mean as muk. Two pounds a week ain't any moar to me than 40 shillin's is to you, but I object to bein' made an infernil fool of. Soon as you was elected by my hard-working friends a feller wanted to bet me that you wouldn't be in the house moren a week before you made as ass of yousself. I bet him a Cow on that, as I thought you was worth it then. After I got your note sayin' you deklined to ackt in the matter i druv the Cow over to the Feller's place an' tole him he had won her. That's orl I got by howlin' meself horse for you on think you'll get in agen. I don't. An' what I don't think is of moar konsequince than you imajin. I believe you take a pleshir in cutin' you best friends, but wate till the clouds roll by an they'll cut you—just behind the Ear, where the butcher cuts the pig. Yure no man. Yure only a tule. Go to hel. I lowers meself ritin' to a skunk, even tho I med him a member of Parliament."

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### ISOLATION OF RADIUM.

At a recent meeting of the Paris Academy of Sciences a letter was read from Mme. Curie and M. Debierne announcing that they have succeeded in isolating pure radium, thus completing the discovery the late M. Curie did not live to achieve. The process by which the radium was isolated is as follows: An amalgam of mercury and radium was obtained by an electrolytic treatment of a radium salt. The substance was placed in a quartz tube, and distilled in hydrogen under pressure. The tube was heated to 700° C. The mercury having disappeared, a thin coating of a brilliant metal was left. This pure radium, which is preserved in a sealed vacuum-tube, is described as a white metal, atomic weight 226, which oxidizes rapidly in air, adheres to iron, burns paper, and decomposes water, with the formation of a soluble oxide.

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### "SHORT TALKS ON BACTERIAL THERAPY."

Doctor G. H. Sherman, of Detroit, has started a series of "Short Talks on Bacterial Therapy," the first of which will be found on page —. The Doctor is doing much to popularize amongst the general profession the use of the bacterial vaccines first introduced by Wright, of London.

We understand that a book by Doctor Sherman is now in the press, to be entitled "Vaccine Therapy in General Practice," and readers of the THE MEDICAL BRIEF may obtain a copy on request. This book will contain about 140 pages, and will be bound in cloth. It will, doubtless, make a valuable addition to your library, and if it stimulates you to get into closer practical touch with vaccine therapy it will be a good thing for your practice, for this comparatively new method of treatment is here to stay. It has made good.

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### PULMONARY AND STRUMOUS CONDITIONS.

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### INHALATION TREATMENT.

Twelve months ago David B. Lees, M. D., F. R. C. P., Consulting Physician to the Hospital for Sick Children, Great Ormond St., London, England, read before the Therapeutical Section of the Royal Society of Medicine a paper on the Physical signs of Incipient Pulmonary Tuberculosis and its Treatment by Continuous Antiseptic Inhalations.

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# The Medical Brief

A MONTHLY JOURNAL OF PRACTICAL MEDICINE.

Vol. XXXIX. St. Louis, Mo., February, 1911. No. 2.

## EDITORIALS.

### RESEARCH IN MEDICAL COLLEGES

THE latest Bulletin (No. 5) of the Carnegie Foundation Report is a most interesting and instructive document, and furnishes food for thought upon many and varied aspects of the subject of education. It deals with the large question of academic efficiency as compared with the general average efficiency in the industrial world, the investigation being undertaken and the report made by an intelligent and impartial layman, one Morris Llewellyn Cooke, a member of the American Society of Mechanical Engineers, and a gentleman who "specializes (we quote from the preface to the Bulletin) in the organization and management of industrial establishments and the installation in them of improved methods based on a scientific study of the results desired and the processes involved." Hence, as the preface further points out, "the standpoint (of both investigation and report) is the same which Mr. Cooke takes when he examines a manufacturing concern."

There are many excellent features of this latest report which strike the reader upon the most casual reading, and upon which one is tempted to stop and comment. Conspicuous among these is the marked contrast in spirit and attitude which it offers to the report made by Messrs. Pritchett and Flexner in Bulletin No. 4. Mr. Cooke displays a scrupulously fair and judicial consideration of every phase of the questions dealt with, appearing in every page of his well-written report, which gives his findings all the weight which those of Messrs. Pritchett and Flexner lacked by reason of their prejudice and narrow viewpoint. As witness, for example, Mr. Cooke's premise that "one must, in fairness to the colleges, have in mind the *average* efficiency of management outside of the colleges as well as the more conspicuous examples of administrative efficiency"; his expressed recognition that "many are expecting marked changes in method to be brought about within a short time"; his "effort to get at the viewpoint of all the different grades of teachers"; and his sensible appreciation of the limitations of his own methods of investigation and criticism; from all of which Messrs. Pritchett and Flexner might learn a much-needed lesson.

There are also, as we have remarked, many and various lessons of value pertinent to the report itself, all of which are worthy of serious consideration and discussion. For the present, however, we desire to confine ourselves to a brief consideration of Mr. Cooke's observations and suggestions concerning the matter of research work in the colleges he visited, and their bearing upon the question of college research work in general. The subject of physics was selected as the objective of Mr. Cooke's investigation because of its representative character, both as to method and efficiency; but that which he observed and that which he suggests in

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relation to this subject are equally pertinent to every other department of college education, including medicine.

Without going into the detail of this section of the report, it may be said that the net conclusion of Mr. Cooke's investigation is contained in his assertion that "the teaching of undergraduate subjects and research in that subject have little in common"—a conclusion with which we most heartily agree. Some of his subsidiary conclusions—such as that a great deal of time and money is wasted on useless and palpably barren research—are equally in accord with our own views of the matter. But our present concern is with the fatuous practice so prevalent in the modern college, of over-estimating and over-doing the research feature in its undergraduate course. Indeed, it is not too much to say that the word "research" is the modern academic shibboleth—"the master-word," as Mr. Cooke says in his report, "which opens the coffers of the prosperous." And it is both interesting and significant to observe that this very matter of research work, which Mr. Cooke deprecates in the undergraduate curriculum, formed the dominant keynote of Messrs. Pritchett and Flexner's report, upon which they practically based their estimate of educational efficiency; so that Mr. Cooke's criticism that "some of the places visited are research laboratories first, and after that, schools for teaching" almost precisely expresses Messrs. Pritchett and Flexner's highest ground of commendation.

So far, at least, as medical colleges are concerned, we believe that Mr. Cooke's criticism is thoroughly sound, even as applied to the larger university schools of medicine. We take our stand by him unreservedly when he says, "I am not recommending that the universities, as a class, should do less work in research, but it is my feeling that both the research and the teaching would be more efficiently done under a different organization than now obtains." It is not the function of a university, in its capacity as a teaching body, to carry on research work; nor is it the part of a teaching faculty. We do most heartily believe that the university has a research function; but it is a separate and distinct function from that of teaching, and certainly the undergraduate student has no concern with it. If it be desired, as is done in Europe and England, to place at the head of the teaching faculty a research man of achievement and repute, there is no objection to that, provided, as is also done in the countries mentioned, the actual duties of such a man do not mix into or conflict with those of the actual teaching staff. But to make research work the password to a teaching faculty, or a factor in the undergradute curriculum, is both absurd and inimical to teaching efficiency.

If this be true for the large university, it is a hundred-fold more true for the smaller schools of medicine, whose teaching efficiency is not enhanced, but greatly vitiated, by the foolish attempt to meet the current craze for research work. These smaller institutions naturally have neither the money nor the prestige to attract research men of weight and eminence, nor can they even afford to maintain a mediocre research faculty distinct from their teaching faculty. Hence they are driven to the expedient of spoiling good teachers to make poor research men, and both teachers and students suffer accordingly. And furthermore, such a course is as gratuitous as it is disastrous; for if, as Mr. Cooke sensibly says in his report, "undergraduate teaching of a subject and research in that subject have little in common," then a research department is not at all necessary to a good teaching school of medicine, but, on the contrary, those schools which, recognizing that they are not universities and not expected to be, pass up the smattering of research work, and devote all their resources and effort to the achievement of high-grade teaching and clinical demonstration, will in the long run command the highest respect of the profession and the most substantial endorsement of the public.

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## HOSPITAL MISMANAGEMENT

A SWEEPING invesigation is being made by the Chicago Civil Service Commission of alleged abuses in Cook County Hospital. Not only former patients, but nurses and internes, are being examined under oath, the latter two classes of witness under full protection by the Commission from dismissal or persecution on account of the evidence they may give, and some very interesting and unpleasant stories are coming to light of mismanagement in the various departments of the institution. It is none of our business to pass judgment upon the relative truth or falsity of the charges and counter-charges made in this particular case. We are not the custodians of the affairs of Cook County Hospital, and the Cook County Commissioners may be trusted to deal with the matter adequately and fairly. But the incident cannot fail to suggest to the professional mind—what every physician knows, but is naturally rather diffident about saying out in meeting—that a similar enquiry into the conduct of hospitals in general would be a very salutary proceeding.

Unfortunately, the evils of mismanagement and inefficiency—we will not say abuses, as implying a deliberate intent which we have no thought of imputing—are not confined to public or municipal hospitals, where, even if there be no excuse, there is at least some reason to expect a certain amount of laxity and neglect. Analogy and example drawn from other departments of public service, if nothing else, would lead one to look for such attributes in the conduct of a public hospital; and even a civil service system, though it may mitigate, cannot completely do away with the mischievous influence of politics in public institutions. But conditions are far from satisfactory in private and denominational hospitals, even where prices are charged high enough to insure, on mere commercial grounds, the highest type of care and service.

Every physician who has had even the most moderate occasion to place his patients in a hospital has experienced this—to say the least of it annoying state of affairs. Indeed, it may be said at once that the medical profession, in general, is in no way responsible for the conditions of which we are speaking, but, on the contrary, physicians suffer from it equally with their patients. It is exceedingly humiliating to a medical practitioner who has induced his patient to accept what he sincerely regards as the advantages of a hospital regime, and has recommended what he considers to be a first-class institution, to be obliged to listen to complaints from that patient—complaints which he cannot help knowing, from his own observations, are well grounded—of the service and cuisine and attendance of the hospital. Naturally, the patient is disposed to place some of the blame, or at least the responsibility, upon the doctor who brought him there. The doctor, on his part, is helpless to remedy the situation, and, however chagrinned he may feel over the matter, feels restrained by a sort of esprit de corps from taking sides against the hospital. And so he loses the confidence of his patient and the respect of the institution, and himself is weakened in his faith in men and things. If, on the other hand, he be an impulsive and fearless man, and makes a vigorous kick on behalf of his patients, then he makes himself a persona non grata with the hospital, and is practically deprived of what little advantage the institution did afford him in the treatment of his patients.

From the public's point of view, the matter is still more aggravating. Having paid a rental which, in any first-class hotel in the land, would not only entitle him to, but insure him, the best the house could afford in the way of attention and conveniences, it is little wonder that he feels disgruntled to find that in the hospital he cannot get a decent cup of coffee, or an appetizing plate of broth, or half the time

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so much as an answer to his call bell. Nor does such a patient, accustomed to the respectful consideration and civility of those to whom he pays his good money for such attentions, relish the high-handed and dictatorial treatment which he so frequently receives from the nursing staff and orderlies. He is, of course, content to submit himself to the commands of his doctor, and to abide by the reasonable rules and regulations of the institution which are necessary for his own and the other inmates' good. But he feels, and rightly feels, that the personnel of the hospital system from the superintendent down to the elevator boy, are there for his express convenience, just as truly as the small army of chiefs and underlings that wait upon him in a hotel.

Nor is this commercial viewpoint the only consideration. The patient who is subjected to these petty annoyances and discomforts is, in his sick state of body and mind, more than likely to be unduly ruffled and upset, and to have his recovery to just that extent hindered and retarded, instead of hastened and enhanced. And thus a hospital regime, except for cases of extreme illness or major operation, and as long as such cases hold the attraction of great urgency and interest for the hospital staff, is made rather a disadvantage than an advantage to both physician and public.

As stated, we do not suggest that hospitals deliberately and maliciously practise these sins of commission and omission. They are largely the result of inefficiency and mismanagement. Yet they are none the less reprehensible; and every physician knows, of his own experience, that they are common conditions. For our part, we cannot for the life of us understand how hospitals which exhibit such slovenly disregard for the comfort and convenience of their patrons can expect to hold good patronage; indeed, we marvel how they have done so as long and as well as they have. But neither the public nor the general practitioner (who are, after all, the main support of the hospital) will tolerate such conditions forever. Hospitals, as well as all other public hostelries, must keep abreast of the time. If there be any crusade worthy of the efforts of a large organized medical body—the American Medical Association, for example—and if such a body be really and genuinely anxious to do something for the public welfare, we respectfully suggest that the overhauling of the hospital system offers a most excellent and fruitful field. Perhaps, on second thoughts, if the American Medical Association should undertake such a task, the situation would be made worse rather than improved; for favoritism and "interests" would be sure to enter into the process. However, there is room for a reformation from some source and by some channel.

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## NEGLECT OF MEDICAL HISTORY

IT is little short of astonishing that in a presumedly learned profession, whose doctrines are inspired and its conduct governed to so large an extent by conservatism and tradition, there should be such a lamentable ignorance of medical history. Quite aside from any considerations of educational thoroughness and practical utility, one might suppose that among a class of men representing more than the average degree of intellectual culture, there would be a goodly proportion of purely esthetic interest in the history of their own science and profession—rich as it is in the most absorbing and significant lore, pertaining to both men and processes. One of the oldest, if not the very oldest, of human avocations, as old as man himself, antedating even religious cults, many of which flowed out of the physical needs of mankind—it would seem that the history and development of medicine would offer an attractive field of reading sheerly on the ground of its own innate relationship to the humanities. And when one further considers that it is directly concerned, and

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has always been closely associated, with the most elemental and intimate experiences of individual, family, and national life, it is hard to understand how any physician with the least glimmering of philosophic interest in his craft can have escaped its spell. Yet the fact appears to be that, as a class, the medical man is not only profoundly ignorant of, but utterly indifferent to, the historical aspects of his calling.

But it is not merely the esthetic or literary viewpoint that makes an appeal to the medical profession for a wider and better acquaintance with its own history. Against that appeal, by itself, it might be urged that the average practitioner, busy with the practical phases of his vocation, has but little time, even if he had the inclination, to browse among its historical lore; and that this dilletante indulgence of the esthetic faculty must, in the nature of things, be restricted to the favored few who have both the taste and the leisure. Such a summary disposition of the matter, however, will not avail, even from the most practical and materialistic quarters, because both the science and the practice of medicine are of such a nature that it is impossible to divorce their historical and their pragmatic aspects. As a science, medicine did not spring, Minerva-like, from the brain of Jove, but is a composite product of a slow evolutional process, to which every age, almost every people, and certainly every scientific and philosophic epoch, has contributed. Into its crucible have been thrown the theories and empiricisms of hundreds of centuries, all of which have been subjected to the inexorable smelting process by which the noble metals are separated from the base. The process, advanced as it is, has not been perfected—it is still a process—and it is hard to see how the present contents of the melting-pot can be intelligently evaluated or adequately utilized without some little knowledge, at all events, of the flux of which they are the net resultant,—at least of the salient stages and their significance. It does not seem that any man can be thoroughly equipped to the task of interpreting the physical maladies of mankind—in which are included all the agencies of etiology and diagnosis—or of applying remedies—in which are embraced all the resources of modern therapeutics—who is not at least on speaking terms with the history of medicine.

If a real and valid excuse be sought for the ignorance of, and the lack of general interest in, medical history among the profession at large, it might, we think, be found in the almost utter lack of the right kind of literature on the subject. We are not overlooking or belittling the fact that there are several histories of medicine in the field which, regarded from the standpoint of sheer historical accuracy and wealth of data, satisfy the most exacting standards. There are even works extant which attempt, after a fashion, a more or less philosophical interpretation of the data. But we must confess our feeling that they are not such histories as the average man in the profession could be expected to read with any degree of interest or understanding. What is needed—and badly needed—is a historian with a proper sense of proportion, a keen discrimination between the essential and incidental, and a charming literary style, who shall, in a work of moderate dimensions, weave for us the fascinating story of the birth and growth of medical science, in language that all may understand, with an authoritative correctness as to facts (but not too many of them) which none can gainsay, and in a perspective that shall clearly display each epoch and landmark in its true and natural relationship to the bent and development of the process.

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# Practical Value of the Temperaments.

By H. J. H. Hoeve, M. D.,
Professor of Anatomy in the College of Medicine of Drake University, Des Moines, Iowa.

CONFRONTED with the theoretical question, we should doubtless all admit the importance of temperament in the physical and mental make-up of the individual. Indeed, temperament may be fairly regarded as the net resultant of all the variations that go to make up an individual's heredity. The insurance companies, who are the wisest of all in such matters, take serious account of it. But we medical men, as a rule, are all too prone to scoff at it, or to ignore it altogether. Therefore, Dr. Hoeve's able paper is both timely and practical. It calls attention to the physical and clinical significance of the temperaments, adopting Jacque's classification, based on anatomical characteristics, namely, the vital temperament, the mental type, and the motor type, all of which are admirably described by the author, and skilfully differentiated. These are the days of biological medicine, and every physician should acquaint himself with the truths of biology in their widest and profoundest aspects, as they relate to health and disease.

THE temperaments are mostly referred to as the varieties of the physical constitution in man. Some of the older classifications of the temperaments used to consider them under three heads: the phlegmatic, choleric and the melancholic. Spurzheim's classification increases the number to four, viz., the lymphatic, sanguine, bilious and the nervous temperament.

But while all these classifications seem to meet the requirements, at the same time, they are very hard to differentiate so far as the general practitioner is concerned. We all know that the particular state of the constitution depends upon the relative proportion of its different masses and the relative energy of its different functions. The body is tempered, in fact, by the combination of these constitutional elements in various proportions. The predominating element determines the temper or temperament. Of course, the others may be present in innumerable modifications so that most important arrangement would be to classify the number of individual pecularities in their simplest elements and adopt some classification under which we could group persons who resemble each other in certain peculiarities, or persons who have similar organizations. In order to accomplish this, writers on this subject have usually considered temperaments under from three or five heads. The simplest classification seems to be that of Dr. Jaques. He classifies the temperaments according to an anatomical basis. Motor mechanical system, the vital or nutritive system, the mental or nervous system.

According to the different peculiarities the temperament is classified. For instance, the motor type would be the easiest to recognize. We find the framework and the musculature enormously developed. Of course this type would be more frequent in males. They are generally tall, with broad shoulders; adipose tissue is lacking and the joints are large and prominent. Neck rather long but enormously developed muscularly. Face oblong or angular. Front teeth large, of a yellowish hue; lower jaw massive, frequently square. (See prize-fighter's jaw —Woolsey.) Malar bones prominent

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and higher than in other types. Thorax well developed, hands long, with powerful grasp. Face gives an impression of earnestness. Forehead slightly retreating, never high. Parietal ridges bulging. Features sharp or angular, but coarse.

*Vital Temperament*—Here we find the body large, tall, the limbs shorter than in the motor type, but they are peculiar in that they are tapering. That is, the shoulders and upper part of the arm are quite thick; the arm tapers a little, the forearm is a little thinner, and the hand very small. Head round, neck short and thick, the shoulders broad and well rounded, the chest full, an abundance of adipose tissue; well developed abdomen. The forehead does not slant as much as in the motor type but there is a slight bulging forward. The bones are much more delicate than the motor type and therefore more easily fractured. The skull is never thick.

*Mental Type*—Very frequently long in body, quite tall and slender. Features fine and thin, sharp but well moulded, in fact, the entire features indicate the moulding of a very sensitive nervous system. Fingers are long, hands tapering. Nails are long and not spatulated as in the motor type. Frequently they are curved from the root, the nail so often described in tuberculosis. Chest fairly well developed but not as well as in the motor type. Teeth are bluish. Of course, all dentists know that bluish teeth are not the strongest and decay easily. The yellow teeth of the motor type are the most endurable.

Peculiarities of hand shake. Motor type is always fond of shaking hands in a full hearty manner and with a firm strong grasp.

The mental type is the one which hesitates and reflects before shaking hands, then it may be a hurried shake which is strong and fairly like the motor type.

The vital type is the don't care type. The act of shaking hands is merely a placing of their hands into the one of the person who wishes to shake hands, and there is in reality no grasp at all.

All of the movements of the body are characteristic of one of these three types. This applies to the act of walking and each type has its distinctive walk. Of course, these characteristics may be combined on account of the types themselves being an admixture. In fact, most of the types are an admixture of one or the other types and correspondingly the characteristics will change, but as a whole, we find the motor type the one which represents greater energy and continuity than the other two. They are not brilliant, but persistent and this latter characteristic enables them to accomplish a great deal.

The vital type is the brilliant one, it represents much superficial energy, but the continuity to acquire deeper knowledge is frequently lacking, and those of the mental type possessing these two characteristic (energy and continuity) are certainly the blest ones. The roster of this type is small.

Every general practitioner has some method of acquiring information regarding the classification of his patients. This is necessary in order to govern his dosage, quality and quantity of food and care of the patient generally. Unless, however, he knows something of the proper classification of types and the reigning characteristics of each, he will often examine the physiognomy of his patient, and while seeing, knows not what he sees.

Naturally the motor type will require a larger dosage to accomplish the same purpose than the mental type. In the latter type the dose may be even one-third of that required for the former. This applies to questions concerning food as well. An individual lacking in the characteristics of one type may require an entire change of diet to produce a certain result. A meat diet, where energy is required, etc. For these reasons very parctitioner should familiarize himself with this subject.

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# Three Cases of Extra-Uterine Pregnancy

By Howard Hill, M. D.,
Prof. Surgical Anatomy in the University Medical College, etc., Kansas City, Mo.

EXTRA-UTERINE pregnancy is far more common than is generally supposed, and yet cases of this nature continue to be misinterpreted and wrongly diagnosed with all too great frequency. One of its most conspicuous characteristics is its atypicality, to which must be attributed the common tendency of the physician to overlook. Hence the importance and value of hearing from every quarter where the trouble has been properly diagnosed, with a clear and faithful account of the signs and symptoms by which it was recognized. The author of this article cites three cases, two of which were irregular and atypical, and the third a typical instance of extra-uterine pregnancy with rupture. The last case serves as an admirable foil against which to study the other two, one of which was diagnosed and operated upon before rupture, the other after rupture. Both were attended with menstrual irregularity. There is much to be learned from the recital of these three cases.

THESE three cases are described with a view to bringing out some points which should be kept in mind when examining cases of suspected extra-uterine pregnancy.

Case 1. Mrs. T., seen February 11th, 1903, with Dr. J. Boyd, Baldwin, Kas. The history of this case was that she had passed her last menstrual period 51 days when I saw her. She felt perfectly well during the first 40 days, but at the end of that period she began to have cramps in the abdomen, sharp cutting pains recurring in the course of two hours or so. Three days prior to my seeing her she had very severe sharp pain in the right side. During the two days immediately preceding my first visit she remained in bed, her temperature ranging from normal to 102. Dr. Boyd carefully examined her a week before I saw her, and again the day before I saw her, noticing distinctly on his second examination a marked increase in the size of the right tube. On examining her under an anæsthetic I found a soft movable enlargement of the end of the right tube.

There was no history of any pre-existing disease of pelvic origin. Her youngest child had been born three years before.

There was a bloody discharge from the uterus, which she had noticed during the last three days; and after careful thought I felt that I was warranted in making a diagnosis of unruptured tubal pregnancy, and operative procedure was therewith begun. On opening the abdomen a single drop of blood was found in the Douglas pouch. The tube was brought up into view and on the outer third was seen a swelling one inch long by probably one half inch wide, which was evidently a tubal pregnancy. (Subsequent microscopical examination showed this diagnosis to be correct.) The tube was removed by excision. The broad ligament was closed with a continuous suture and the abdomen closed in layers. The patient made a perfect recovery.

Case 2. Mrs. H., aged 25, seen by Dr. George B. Thompson of this city. She began to menstruate at the age of about fifteen. She has always suffered greatly at her menstrual period, the periods being prolonged sometimes to six days,

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the amount of blood lost being excessive, and passing many large clots. Her last period was three weeks prior to my visit. There was nothing unusual to mark it except that the pains were more severe than usual, and the discharge of blood prolonged ten days. On examination I found an irregular mass filling the whole lower pelvis. I could distinguish neither tubes nor ovaries on either side. Her temperature at this time was 102. It had been elevated during the past week. I made a diagnosis of pelvic abscess and the patient was removed to the hospital and operated upon the next day. On examination under anæsthesia at the time of operation, the thickness and irregularity of the mass led me to make an abdominal incision, for which I was subsequently thankful.

On opening the peritoneum the pelvis was seen to be filled with clots, darkened and old, with numerous adhesions of the omentum to the left tube, but the right tube was free. It was distended at its outer third with clots; the fimbriated extremity would easily admit my index finger. A tubal abortion was evident as there were some placental attachments to the right side of the pelvis and the anterior surface of the right broad ligament, but otherwise no trace of the foetus could be found.

The right tube was exsected and the wound closed. On examination the left tube seemed closed at the fimbriated extremity. The ovary was very small, cystic and adherent, and it was therefore removed. The broad ligaments were attached to the posterior surface of the uterus after the method of Coffey, in order to close up the raw surface left after the removal of the tubes.

This method was highly successful in this case. One peculiar feature in connection therewith was that in taking up the slack of the broad ligament by this method of suturing, there was effected a cure of a right femoral hernia from which she had been suffering. I had promised to operate upon this hernia, but had forgot it during the operation, and was agreeably surprised to find no recurrence of the hernia in the two years which have elapsed since the operation.

The abdomen was closed without drainage, and the patient made a good recovery.

Case 3. Mrs. A., aged 30, married ten years, never pregnant. On December 15th, 1904, she menstruated in the regular way. January 15th she failed to menstruate, but suffered from cramps, which continued at irregular intervals during the following week. She next noticed a brown discharge, which continued for ten days, the cramps coming on now and then up until Friday, February 3rd, when she noticed a little red blood. She noticed this again Saturday. Sunday, Feb. 5th, at noon, she had severe cutting pain in the abdomen and felt faint. That night at 10 o'clock she had another severe pain and again at 6 p. m. I saw her at 7 p. m., and found her with a pulse of 110, mucous membrane and skin pale, sighing respiration and every evidence of internal hemorrhage. She was exceedingly tender over the whole of the lower abdomen. Without making a vaginal examination (it being unnecessary in the presenece of such a history) I diagnosed ruptured tubal pregnancy and had her removed at once to University Hospital, where an operation was done on admission at 9 o'clock in the evening. The abdomen was opened down to the peritoneum. As usual in such cases the peritoneum was black. The pelvis and abdomen were filled with bright liquid blood and a large quantity of dark clots. These were scooped out, the uterus brought up with tenaculum forceps and both tubes examined. The right tube was ruptured along its dorsum. This was clamped at both ends and the pelvis wiped dry with gauze sponges, wrung out of hot normal saline solution, and the intestines packed out of the field of operation. The ovarian artery was ligated at the brim of the pelvis and the tube was excised from the top to the

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broad ligament and from the horn of the uterus. The wound in the uterus and broad ligament was closed with continuous catgut suture. The abdomen was closed in layers and the patient returned to bed. On account of the great loss of blood prior to the operation she received two and one-half pints of hot saline solution in the basilic vein, and subcutaneous injections of strychnine, 1/30 gr. were given every three hours.

In case 1, we had an unusual opportunity to study a case prior to rupture, it presenting all the symptoms of an extra-uterine pregnancy, that is to say, the proper period of time had elapsed for the menstruation period. She was under the observation of a skilled practitioner, and the fact that the enlargement in the tube grew steadily during the last few days, and that the mass was not adherent, were the chief points which helped us materially in reaching a diagnosis.

In case 2, we have one which in the opinion of the writer would seem almost impossible of diagnosis, for tubal abortion frequently occurs without diffuse severe evidences of internal hemorrhage. We also had in this case such a prolonged history of menstrual disturbances which were almost equal to the symptoms presented at the time the abortion took place, that it was almost impossible to separate them from the symptoms of the abortion.

Case 3 presented a perfectly typical history of extra-uterine pregnancy with rupture. She had, in fact, all the cardinal symptoms, the brown discharge, the cramps occurring now and then, slight bloody discharge later, and finally the severe pain which indicated first hemorrhage and lastly complete rupture. When such symptoms are found it is absolutely unnecessary to make an examination, for there is no other condition that would produce them.

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## DYSPEPSIA OF OLD AGE.

W. S. Fenwick, in *The Lancet*, asserts that out of 100 persons over 65 years of age suffering with chronic dyspepsia, 66 of the cases are secondary to organic disease of some important bodily organ, while 34 owe their symptoms to a progressive degeneration of the secretory structures of the stomach and bowel. In the former class the digestive disorders usually take the form of a chronic gastritis, due to disease of the kidneys, prostate, heart, lungs, liver, pancreas, chronic gout, or inefficient mastication; while about ten per cent of the entire number are due to long continued hypersecretion from chronic ulcer in the vicinity of pylorus, gallstones, or diseased appendix. The pathological changes are traced, and are found to be more constant in women. Flatulence is the most constant symptom of the complaint. It is particularly severe at night Constipation alternates with diarrhea. The main indications for treatment are to correct the subacidity and to relieve the flatulency and constipation. Large doses of diluted HCl may be given twice a day after meals, combined with a dram and a half of glycerin. Pepsin is useless. Metchmikoff's sour milk is undoubtedly one of the best means of relief. Malt preparations are of service when the intestine is particularly at fault. The usual bitter tonics had best be omitted, as they are apt to aggravate the condition. The new alcoholic essence of peppermint is of great service. One teaspoonful may be given in a sherry glass of water for an acute flatulent condition. For the constipation salines and mineral waters are to be avoided and recourse had to a mixture of cascara and maltine, a confection of sulphur and guaias, an occasional dose of gray powder.

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**Gastric Constipation.—**

When gastric dilatation is accompanied by constipation, it must be treated with saline aperients, as Carlsbad water, or the following pill:

| | |
|---|---|
| Aloes Pulveris | gr. ij |
| Ipecac pulv | gr. ¼ |
| Saponis | gr. j |

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# Health and Its Measurements.

By Eskholme Wade.

(Continued from page 514 in the September Number.)

In this article, Eskholme Wade continues his enquiry into the fallacies of the dietetic problem which was begun in our September issue. He points out some of the erroneous conclusions which habit has forced upon science, and shows that the so-called dietary instincts of man are nothing but the product of custom. He then proceeds to discriminate between these and the real instincts, which are common to all humanity, and to argue that disease, so far as it relates to errors of metabolism, is the result of perversion of these genuine instincts. He believes that fruit is, par excellence, the agent of cleansing, and maintains that the commonly taught doctrines of carbonaceous foods are all erroneous. He points out that in nature there are no such things as carbo-hydrates, and no free fat. And he calls attention to the fact that only when the carbo-hydrate diet is practically relinquished do the tongue, the blood, and the urine clear up, and the excreta appear which indicate a high degree of health. To all of which we do not necessarily assent, but in which we recognize important matter for thought and investigation.

In the first article of this series attention was drawn to the correspondence between the condition of the tongue—its texture and the number and depth of the fissures showing upon the surface—with the health or wholesomeness of the digestive tract; the degree of such wholesomeness being again reflected in the living blood when microscopically examined, and in the diminished toxicosis, as well as the lowered acid index of the urine.

The attempt will now be made to show how this impairment of the functional activity of the digestive tract, so far as healthy blood making processes are concerned, is produced.

The causes which may be and, apparently are, provocative of disease are many and varied. They range from bacilli to a rise in the bank rate; from overwork and worry to lack of work and lack of anything at all to worry about; from a drop in temperature, a draught, or exposure, to a rise in temperature, or insufficient exposure and fresh air. But it will, perhaps, be conceded that all such externals affect us only when we are in a condition to be influenced by them. They are merely the exciting and not the real cause of disease. The underlying cause must lie in the lack of resistance offered by any organism to such more or less unavoidable externals.

### External Conditions Powerless.

It will again, perhaps, be admitted that none of these externals can in any way exert a prejudicial influence upon the condition of the alimentary canal, so far as the development of bacteriological flora is concerned, with consequent reaction upon the blood and the urine. The only causes which can produce and contribute toward a condition of internal putrescence must be the foods we eat and the way we digest them. The fluid and food residua of a new-born babe are free from all traces of intestinal putrefaction. Therefore, a condition of internal putrescence, though presumably the normal state, is yet the product of later habits. And as this

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toxicosis varies greatly with the individual the question arises: Which amongst the many varied foods we eat are most likely to produce that condition of internal degeneration previously described, which must be antecedent to the appearance of intractable chronic disease, and in which toxine absorption becomes pathological? For though it is possible to enjoy average health even with a considerable degree of intestinal putrefaction, yet were the alimentary tract in a more wholesome condition so much the greater would be our health and so much the greater would be the resistance offered to disease in the future.

**Misleading Calculations.**

When we begin to probe into the mystery of the effect of food upon the body we find that little is practically known and still less is proven. There are certain theoretical facts relating to the chemistry of digestion and assimilation, and among these we accept the theory that a given quantity of protein, carbohydrates, salts and cellulose is needful for the proper maintenance of metabolic function, such quantities varying with the body-weight and the ouput of the body's energy. The method employed for the collection of such data has been to ascertain the average food consumption of a number of individuals engaged in like occupation and to draw a mean therefrom. But such a mode of calculation may possibly be misleading. Because a number of men digging a trench eat a certain quantity of food in certain proportions it by no means follows that other men engaged in like occupation must, of necessity, eat like quantities. For the normal healthy man is but remotely concerned with eating what is best for him, either in quantity or kind. He generally eats the largest amount possible, compatible with doing the work allotted to him.

It might be asserted that these toilers in the trench follow their instincts and, therefore, their habits are to be trusted. But we are here confronted with the unfortunate fact that man, unlike the lower order of creation, has largely lost those instincts which should guide him in his choice of food, replacing them by habits which are at all time prone to degenerate into impulsive desires and cravings. And his sense of taste often becomes so perverted that the things which are doing him the most harm are always those he most blindly craves For instance, life without bacon for breakfast, to many Anglo-Saxons, would hardly be worth living. Yet such an article of diet is repellant to the clean palate of a healthy child or to the unaccustomed taste of many lowly members of Latin races. Experience has proven that a diet of roast beef, bread and potatoes is neither appreciated by the maccaroni-loving palate of Italians nor suited to their needs. The frugal regime of a Chinese coolie would spell starvation to a London dock laborer; to a hygiene appreciative Japanese the diet of a British workman would instinctively taste unclean and prove unwholesome. So the argument must be abandoned that it is instinctive in the human race to eat, either in quantity or kind, those foods to which at present we are largely habituated. Otherwise there would be some approximation, as in the animal world, both in quantity and kind.

**Nature's Provision.**

But because man has, apparently, no instinct which will guide him unerringly in his choice of nutriment whereby internal integrity is maintained, at least to the degree that he becomes impervious to all disease, it by no means follows that Nature has thus lamentably failed in his equipment. It is more in accord with the orderly scheme of Creation to accept the premise that we are probably equipped with such an instinct, but that habit and custom are such that unknowingly it is impaired in nearly all cases and perverted in many. As I hope to show later, disease is only one of the serious consequences of this impairment. That disease, or lack of ease, is simply

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suffering for which we alone are responsible is obvious. And our lamentable ignorance regarding the simplest of laws relating to healthy metabolism is evinced by those numerous infantile ailments to which all children are, seemingly, more or less liable; and still more by the fact that decaying teeth are deemed to be an inevitable human blemish only to be corrected by the artificialities of the profession of dentistry. When this instinct becomes not only impaired but perverted, then we produce the inebriate, the sexual maniac, the cancerous, the diabetic, not to mention other terrible and intractable ailments in which the causal nexus between the habits of former years and the ultimate penalty which Nature exacts is entirely lost from view. This sweeping assertion is proved by the fact that all pathological conditions which are in no way amenable to treatment are invariably accompanied with the tongue degeneration and concomitant symptoms described in my first article. It is, perhaps, needless to mention that such degeneration is not the inevitable lot of all. It is wholly the product of our habits, the result of obliterating our instinct.

Now, an instinct common to all humanity, equalling in intensity that almost of the preservation of life itself, is an instinctive revulsion from taking into the mouth anything of an impure, decaying, sickly, cloying or greasy nature. But here again habit and custom do often obliterate or modify this instinct. A few of the many examples which present themselves may be given. Many European dishes are repellant to an Oriental palate; many Oriental delicacies are disgusting to European taste. High game a well-bred Englishman likes and tolerates; decomposing fish he abominates. Yet a Burmese epicurean dish is fish that has been left buried until it becomes putrid. The edible monstrosities of a 'delicatessen' store, like limburger or Gorgonzola cheese, or pate-de-foie gras, are purely acquired tastes; so are most of the dishes regaled over the lunch counter. Yet the consumption of all such articles of diet, did we preserve but a remnant of our instinct for the preservation of internal wholesomeness, would be disgusting in the extreme.

The poor slum child, when necessity compels, will eat the garbage of the gutter with ravenous enjoyment, whilst the extreme of such perversion is seen in the case of savage tribes, it being recorded that the aboriginal Fijians ate pounded worms and offal, and occasionally lunched off their surplus wives and children. Though such tastes as these appear horrible in the extreme they are merely the result of cultivated habit in the acquirement of which instinct in the first instance was either wilfully or ignorantly suppressed. However abnormal and unnatural we may consider them, honesty compels us to admit that pounded worms, from a purely dietetic viewpoint, are superior and preferable to the products of a candy store, being richer in both proteids and salts.

### Is Man Omniverous?

Noting, as we do, this extraordinary human tendency to eat of everything edible on the face of the globe, and, moreover, to combine our varied foodstuffs in many unnatural ways, at first sight it seems reasonable to conclude that man is, by nature, omniverous. But if it can be shown that internal putrescence and defilement always precedes all forms of faulty metabolism and that such defilement is wholly due to dietetic error, it is surely incumbent upon us to question the wisdom of this omniverousness. For it is well to remember that just as the Fijians ate pounded worms and offal, no doubt with great relish and with, apparently, little detriment to their physical well-being, so may civilized communities acquire other tastes which are merely less degrading. It is wholly a question of habit. Such is man's extraordinary adaptability and digestive capacity that he can accustom himself to

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almost anything. And the greater our ignorance concerning the harmfulness of a habit the more we resent any aspersions cast upon it. Quite possibly a Fijian native regarded the first advocate of a regime of bread, beef and bacon as a virulent type of food faddist with whom it was profitless to argue. Why waste time and labor in the preparation of such foods when more delectable and equally nutritive dainties were ready to hand? And, quite possibly, the first food reforming missionary was summarily disposed of as the piece-de-resistance at a subsequent Fijian state banquet.

Thus we see that the habits of eating of the human race, savage and civilized, have little or no relation to what can scientifically and theoretically be proved to be necessary, and still less relationship to our instinct. Habit and custom alone are the determinant factors. Habits are often deadening. Custom is often foolish. And both are sometimes degrading.

Our bodies are built up from the air we breathe, the water we drink, and the food we eat. Air is pretty much the same for all, rich or poor. So is water. But food is far from being so. And when those many inconsistencies from variations in diet arise—inconsistencies which we cannot explain, and which, theoretically and, as the test tube reveals, should not arise—we shirk the difficulty and beget the question by the use of such a saying as: "What is one man's meat is another man's poison." This is a phrase beloved of the layman and of the faculty. It has an air of omniscience. Yet it really explains nothing at all. It merely emphasizes our ignorance. And in our search for light we become lost amidst the subtle intricacies of the chemical changes involved in digestive processes.

**Standpoint of Instinct.**

But when we approach the subject from the viewpoint of instinct and acknowledge that the first requisite of all foods must be to maintain that natural internal purity that instinctively we crave, the problem is greatly simplified. It reduces itself to maintaining internal wholesomeness or to regaining it when lost. And then we discover, that the reason why in so many cases one man's meat proves another man's poison is not due to the food in question. The blame must be attached to the condition of the digestive tract—such as we make it.

As an example. Investigation would, I think, reveal in nine cases out of ten that several years prior to the appearance of a malignant growth either raw fruit of some kind failed to agree with the prospective victim; or the taste for such cleansing, and, therefore, vitalizing nutriment was lost. May be the acids of the fruit caused digestive disturbance; or the cellulose proved indigestible and produced discomfort during its passage over a tender area; or, though the patient might have an excellent assimilative capacity for bread and butter and omelettes when the internal surface of the intestinal membrane was well greased with bacon fat, fruit was evidently not adapted to his or her particular type of digestion. Such idiosyncrasy might be variously ascribed—to "nerves" or to imagination, or to the weather, or to germs, or to the one-man's-meat-is-another-man's-poison theory.

**Fruit as a Food.**

Yet the real explanation is simplicity itself. Fruit is, par excellence, the best of all food cleansers. But the process of purifying twenty or more feet of contaminated intestine is never pleasant. More often it proves painful and creates nausea and disgust. And, quite possibly, if the eating of fruit be persevered with, such a quantity of toxine material is dissolved and carried into the circulatory system that the devitalized body-cells begin to break down under their added burden. Then weight and strength are rapidly lost and the fruit is condemned as innutritious, watery, and indigestible

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food! Whereas, the plain truth is that did we minister from the time we are weaned from our mother's milk to our childish instinct for sweet things by the eating of fruit at every meal, and thus, like every other animal, obey our instinctive senses of sight, taste, smell, and touch, it is not unreasonable to hope that, health being the natural state and the birthright of all, internal integrity might be maintained at least to the degree that draughts and exposure would prove as harmless to man as, say, to the domestic grass-fed cow; whilst such wriggling invisibilities as microbes might be regarded with the same nonchalant equanimity. After all, a sense of smell is a more wonderful and scientific instrument of precision than even a double nose-pieced microscope. And the fact is surely both elementary and obvious that the world progresses, never by curing its diseases, but by realizing the needless disgrace of ever suffering from them.

As all mortal ills are preceded by gradual degeneration within the digestive tract, as the surface of the tongue plainly reveals, and such degeneration is wholly the result of erroneous dietetic habits, we will now turn our attention to the consideration of those foods which are most likely so to pervert our instinct and interfere with healthy metabolism that chronic disease in some form is the penalty which Nature exacts.

**Excessive Carbonaceous Diet.**

Health is incompatible with a clogged, unwholesome external skin. It is likewise incongruous with an unclean internal membrane, or a clogged condition of the intestinal glands and absorbent villi. And the working hypothesis adopted by the writer in his endeavor to ascertain the ultimate effect of any given food upon the human organism has been the natural premise that, internal wholesomeness being the bed-rock basis of our health, those food-stuffs which produce a sticky, greasy, or cloying effect upon the external skin might also exert a harmful influence upon the internal membrane, when we take into consideration the increased degree of internal absorption and secretion. Of the varied kinds of nutriment that we consume those which possess this characteristic in a marked degree are the flour products of wheat, the animal fats and sugar. When combined, such foods form the ingredients of pastry. And the consensus of opinion is that pastry is not a particularly wholesome nutrient. We know the effect of the pure carbohydrates when eaten in excess. It is disastrous. But we entirely fail to appreciate that when taken in moderate quantities—in such form and quantity as the normal healthy man conceives to be perfectly wholesome—their harmful effect, though not immediately apparent, is still present. It is a question of comparison and degree. Until we know what that health and internal purity—the two are synonymous—are like which are born of implicit obedience to a natural instinct we can have no conception of the harm resulting from the simplest of dietetic habits, the product of our misdirected reasoning faculties. And the proof that such nutriment is insidiously more harmful than any other lies in the fact that only when such food-stuffs are relinquished, and articles of diet of a cleansing in contra-distinction to those of a cloying or adhesive nature substituted, only then do those healthy changes in the tongue, the blood, the urine, and the excreta appear which are necessary for the upbuilding of a high degree of health or for the permanent eradication of chronic disease.

A further argument in support of the contention that the purely carbonaceous foods may be unknowingly more injurious to health than we imagine is that within Nature's scheme of food economy free carbohydrates are completely forgotten. Sugar is a wholly artificial product. Flour, and the modes of preparation applied to it, are equally so. And all herbiverous animals, when living un-

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der natural conditions upon their instinctive food, deposit little if any fatty tissues. In fact, we are furnished with no free fat whatever. Both butter and cream are artificially produced; and the oil of the nut, the olive, and of vegetables must be expressed. If we maintain that a more generous supply of carbohydrates is needed for the maintenance of physical effciency than is afforded by the quantity found within foods in their natural form, we are merely placing greater reliance upon the test tube or our erroneous habits than upon Nature's wisdom and our instinct. And this is both a foolish and a presumptuous thing to do. But, in view of the fact, as experiment proves, that the health of the blood and blood-making processes are primarily impaired by the use of such foods, and subsequently this impairment is often accentuated by the craving for other artificial products which their consumption engenders, such a contention is manifestly absurd.

The perfection of metabolism, given proper attention to fresh air and exercise, must depend in its ultimate analysis upon the perfection of our powers of assimilation. And this question of assimilation has hitherto received little, if any, attention. Such investigations as have, so far, been made have taken the form of analyzing the constituents of those foods which are theoretically easy of digestion and readily assimilate by enfeebled digestive organs. Hence the futility of orthodox practice when confronted with many forms of the so-called "wasting" diseases. For surely, thus to pander to an already overburdened and clogged digestive tract must, in the end, add to the existing mischief. And if the contention of the writer be proved and verified that perfect assimilation and perfect metabolism are primarily dependent upon the purity and wholesomeness of the digestive sponge, then the basis of our therapeutics and the end and aim of all dieting must be how best to initiate the cleansing processes and to adapt the methods of purification to the resisting power of the sufferer. This will be discussed in my next article.

**Summary.**

Thus, to reduce perfect metabolism to a simple question of internal wholesomeness and purity is, perhaps, to the orthodox mind, tantamount to the committal of scientific lese majeste. Yet everything works according to law, even within the human stomach and digestive tract. For a reason that is inscrutable, when we hurl the human frame over a precipice it never acquires the facility of bouncing. On the contrary, we suffer more or less serious consequences for thus violating our instinct. And when we fail to listen to the inward voice consciously or unconsciously as we do in a thousand and one ways by the things we take into the mouth and the way we prepare them, it is equally foolish to think that in the process of time Nature will kindly oblige by furnishing us with a body adapted to our gastronomic eccentricities. Surely, woman was not placed upon this earth primarily to cook and to wash up after it? And we pay for our ignorance and presumption by the penalties of vice, disease and human degradation. We endeavor to dissipate the viciousness, we deplore the degradation, but our diseases we are prone to accept as something inevitable. In our search for a "cure" we may find an antidote to the disease, or we may discover the means of palliation, or we may obliterate the symptoms and thus merely change the character of the disease. But we are only chopping at diseased branches whilst the real cause lies neglected—in the roots of our poor, smothered instincts.

We are given a perfect food—fruit. Fruit is the only food which entirely satisfies our sense of taste; it is the only food that appeals to our instinctive senses, whether of sight, taste, smell, or touch; it is the only food that needs no preparation; it is the only food which

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awakens our aesthetic emotion, for we can find joy in its creation and reverence in its consumption; and it is a food of such marvellous purity that were it alone eaten age could neither wither us nor disease blast us. We reject it—for one reason, because science, forsooth, asserts it to be deficient in 'protein.' That fruit, to the majority, would be a food found wanting in nutritive elements is only too true; and, like the natives of Fiji, they have substituted other abominations, having, possibly, lost their taste for their natural food. But this is not the fault of the fruit nor of Him who made it. It is due to our pathetic ignorance of that most vital of all matters—healthy metabolism and perfect digestion. Hence, concerning health and its possibilities, we really know nothing at all.

Having thus launched my thunderbolt, may I first apologize for the invidious comparison drawn between so-called civilized habits and those of certain tropical aborigines. I do this in self-defense. I wish to spare myself the fatuous epithet of a "food-faddist." And before my critics level this opprobrium may I beg them patiently to bear with me to the end. Let us reflect, and having reflected we must acknowledge that fruit is the only food which makes possible our release from the bondage of the stomach. I repeat it. Man is something more than an animal. And he proves it by transcending the animal part of him —the stomach. Even the brutes of the field worry less concerning their next meal.

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### CLEANSING THE MEMBRANES.

The theory that mucous membranes in pathological states are self-cleansing is a position that can no longer be sientifically sustained, and it is only when we fail to recognize the fundamental principle that mucous membranes must be cleansed and kept clean do we get into trouble and to this end mild antiseptic solutions are necessary.

Fall in this, and you only leave an area of infection that will lead you into further trouble.

In the treatment of the inflammation of mucous membranes it must be remembered that we have with a highly sensative tissue, one with an active nerve and large blood supply. Here we have at once two reasons why strong antiseptic solutions, such as nitrate of silver or permanganate of potassium should be used only in the mildest solution, better not at all.

1. After the secretive mucous membrane is cleansed it can easily be kept so, and by a mild solution.

2. Mucous membranes, if kept clean, heal readily by virtue of their rich nerve and blood supply. Strong antiseptic solutions destroy the normal function of mucous membrane.

The treatment of nasal catarrh is not necessarily the work of the specialist. You will find that Germiletum applied with nasal douche or spray, holding solution in contact for two or three minutes will thoroughly cleanse the nose, mouth and throat and keep it so. The normal functioning of the membrane will soon become evident.

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### A REMARKABLE PRAYER.

A dignified negro pastor of a popular church at Washington, D. C., visited his old home in Dooly county Georgia, recently, and was invited to preach on Sunday at the local church. After such a sermon as only a negro can preach, he called on one of the old deacons, who had known him in childhood, to lead in prayer, and the latter closed his petition as follows: "O Lawd, gib dis pore brudder de eye ob de eagle, dat he spy out de sin afar off. Glue his han' to de gospel plow. Tie his tongue to de plowline ob trufe, an' nail his yere to be wi'less telefoam pole ob salvation. Bow his head 'way down in de narrer, dark valley, where much prayer is wanted; den, O Lawd, 'noint him wif de kerosene ile of sanctification an' set him on fiah!"

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# CURRENT MEDICAL LITERATURE.

## HEART STRAIN AND DILATATION.

Goodheart, in *The Lancet,* discusses this subject with comprehensiveness and intelligence. We quote the following verbatim from his article:

"The question in my mind is whether even true heart-strains, by whatsoever evidence it is possible to locate them, are not due to defective innervation—abortive messages—rather than to failure of response on account of damaged (overstretched) muscle. But in saying this one would not wish to dispute, for one cannot doubt, that a place must be reserved in cardiac pathology for the sometimes result of actual and progressive morbid changes starting from early conditions such as these, and Dr. R. W. Michell's observations at Cambridge on the initial and later stages of what appears to have been genuine cases of the strained heart are very suggestive. But it interested me much to read that as regards *dilatation* that persists he had never found it, except in such who had in addition to strenuous exercise suffered from diphtheria or rheumatic fever. I take it that in general medicine we have a good illustration of what chronic strain *will* do in some of the many cases that one meets with of the dilated heart of chronic renal disease. But spread over so long a time, this is probably an adequate cause; certain strenuous muscular occupations will, no doubt, do the like, but I doubt if such chronic processes give any justification to the term "dilatation without disease," which I confess to cordially disliking, because it is just here that over-anxiety is likely to step in and do harm, and where the true measure of the physiological capacity of the heart for labour needs to be correctly appraised. Errors must, of course, be made on either side. I do not doubt that any of us may underestimate the risks of exertion in a weakling's heart. Still, on the whole, one cannot but come to the conclusion that the heart muscle has a magnificent power of resisting strain, and that dilatation is seldom, indeed, other than a *result,* and *late stage* of real *disease.* Primary dilatation is surely very infrequent, except perhaps as senility advances and degeneration has taken place.

Whether after all this is said we can entirely do without some term such as acute or temporary dilatation for some few cases of sudden overstretching of the muscle wall I hardly feel inclined to decide. There are, of course, cases where, as the result of heavy work, *something* suddenly happens and the heart dilates, and perhaps this may be more often than I may seem to allow. To guard against that possibility I certainly hold it to be necessary that would-be athletes should be carefully selected, and boys graded and inured by gradual training, as is done now in most of our large schools; but in true dilatation I think one may fairly expect some special indications to suggest caution in the particular case. A sudden rupture of a valve is to the point. In such cases the symptoms are usually immediate and severe, and it does not take long to find out that something untoward has come to pass. In the cases of which I have been speaking, this is seldom or never the case, and therefore I have come to think that dilatation, as a condition easily caused, is more often in our thoughts than the frequency of its occurrence would seem to justify, and that by overnursing it we prolong the state that we set out to cure.

## BLOOD PRESSURE IN AVIATORS.

*The Lancet* is surprised that, while the wonderful triumphs of the new art of

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aviation have directed attention to the mechanics of the aeroplane, the equally new problem of the physiological effects upon the aviator seems to have attracted little notice. The rapid ascent to great altitudes exposes the body to conditions different from any terrestrial ones. Mountain climbing offers some analogy, but it differs in the fact that the transition from the high atmospheric pressure of the sea-level to a low pressure takes place much more slowly. In the *Gazette Hebdomadaire des Sciences Medicales de Bordeaux* of Sept. 25th Professor R. Moulinier has reported some interesting observations on the blood pressure of aviators who have ascended to high altitudes. On alighting after ascending to a height of 1200 to 2000 metres the aviator presents cyanosis of the extremities, probably from the low temperature of the high regions of the atmosphere. Often there is congestion of the conjunctivæ. The pulse is slightly accelerated, but there is no palpitation, arrhythmia, or epistaxis. There is often slight and transient headache and tinnitus aurium. Sometimes there is a tendency to sleep, and this may be felt even during flight. After the flight the blood pressure is always increased. In one aviator at 5:30 p. m., before flight, the constant blood pressure in the radial artery was found with Pachon's sphygmometer to be 9 centimetres of mercury and the maximum pressure to be 18 centimetres; the pulse was 70. At 6 p. m., after a flight of 25 minutes, during which at the twentieth minute he reached the height of 1100 metres, the constant pressure was 12 centimetres of mercury and the maximum pressure 19 centimetres; the pulse was 80. This increase in pressure is all the more remarkable as the aviators were athletes in full training. The rise was less marked in aviators who were fatigued. These showed palpitation of the heart and marked acceleration of the pulse (108). In one case troublesome tachcardia, symptomatic of functional insufficiency of the heart, and vertiginous movements, were observed in an aviator who, after a flight of an hour, had reached the height of 1000 metres. No rise in blood pressure was found in aviators who flew at low altitudes, such as 100 to 150 metres. As to the cause of the rise in blood pressure, Professor Moulinier puts forward the hypothesis that it is due to the sudden descent to earth in four or five minutes from a height of 1000 to 2000 metres which was attained in 20 to 25 minutes. At a height of 2000 metres the atmospheric pressure is 591 millimetres of mercury, at the sea level 760 millimetres. In the short time of the descent the circulatory system had not time to become adapted to the change of pressure. He therefore advises aviators to descend more slowly. He also points out the dangerous fatigue to which flight at high altitudes exposes the circulatory apparatus by provoking increased and irregular activity of the heart and vessels. A sound heart and supple arteries are absolutely necessary to an aviator. The list of distressing fatalities to aviators has become comparatively long in a very short time. The accidents are always attributed to some mechanical cause—some breakdown in the machine or unexpected current of air. No doubt this is usually true, but it seems to us quite possible that in some cases the breakdown may have been in the human machine, which is exposed to a new and peculiar stress, both physical and psychical. It is curious that this point does not seem to have received attention.

**Enuresis.—**

For this troublesome complaint in the adult the following mixture will be found efficacious:

| | |
|---|---|
| Tr. Ferri Chlor. | |
| Tr. Nuc. Vom. aa | dr. ss |
| Tr. Cantharidis | dr. ij |
| Syr. Simplicis | dr. vj |
| Aquae q. s. | oz. vj |

One ounce three times a day.

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## BLOOD PRESSURE IN PREGNANCY

B. C. Hirst, in the *New York Medical Journal,* presents the following conclusions:

1. The normal blood-pressure in normal, healthy, non-pregnant women will not vary much from 112 mm.

2. The normal blood pressure in healthy pregnant women will average close to 118 mm. A slight increase over these figures is to be expected in the last month of pregnancy.

3. Blood pressure in toxemia in the first half of pregnancy associated with pernicious vomiting is invariably low.

4. Blood pressure in toxemia in the latter half of pregnancy, associated with albuminuria and eclampsia, is invariably high.

5. A high and rising blood pressure is an invariable and early, aften the earliest, sign of toxemia in the latter half of pregnancy.

6. Upon the rupture of the membranes, there is an immediate fall of pressure of from 60 to 90 mm. This fall is temporary only, but is attended with marked relief in the headache and epigastric pain these patients so frequently complain of. The relief from these symptoms lasts, however, for some hours after the pressure returns to near its original height, which it does shortly after the first fall. A similar fall, but much slighter, is noticed after a sweat bath.

7. There is a second fall of from 60 to 90 mm. after the child is born. This again is only temporary, and in from fifteen to thirty minutes, if a patient has not bled profusely, the pressure is back to somewhere near, but not quite to its level before the birth.

8. Usually in eclampsia the pressure measures high for forty-eight hours after the birth, then begins to subside and reaches the normal of from 118 to 124 mm. in from seven to ten days after delivery.

9. As far as it is possible to lay down any rules in these cases, the author states that a blood-pressure of below 125 mm. could be disregarded; that a pressure of from 125 to 150 mm. needs careful watching and moderate eliminative treatment; and that a pressure of over 150 mm. needs usually active eliminative treatment, and will in all probability, especially if it shows a tendency to climb higher, require the induction of premature labor.

## ANESTHETIC AGENTS AND METHODS.

Buxton, before the Royal Society of Medicine, said that for those who maintain anesthesia right through with one anesthetic, he advocates a mixture which he now employs, rather than the A. C. E. or C. E.—viz., 1 in 10 alcohol and chloroform (Schäfer) by the open method. He employs chloroform *ab initio* when a regulating inhaler is used. It is very important in children, whose protoplasm is very susceptible to all drugs, to insist upon the use of low percentages, at all events during the period of maintenance, and avoid anything like asphyxiating complications. This, of course, would be effected by the employment of a regulating inhaler, especially if we employ oxygen *pari passu* with our chloroform. One can not help being struck by the terrible mortality in young children during the operation of circumcision. Chloroform is commonly given, and children frequently die, and the author thinks they die because the reflexes are so very active in that operation that perhaps those who are less experienced push the anesthetic with the idea of abrogating all the reflexes, which, of course, is an impossibility. Therefore, with the exception of extremely young children—babes a few weeks old—he always employs ether for the induction of anesthesia in these cases, and goes on afterward with chloroform.

The routine anesthetic for youth and middle age is recognized as being nitrous

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oxide gas, followed by ether. When we remember the very potent after-effects of ether, even if there are not nausea and vomiting, the writer thinks we have forced upon us the fact that the majority of people have more discomfort after ether than is at all necessary; this arises, he believes, because in the hands of the inexperienced too much ether is given. It is said that the employment of the open method will prevent this excessive dosage; but that is not the experience abroad, where the open method has been largely used and considerable quantities of ether employed, and where the remote after-effects are frequently prejudicial. So now, Buxton's practice is to confine ether to brief operations, even in middle life, and he follows it with chloroform; and practically always gives chloroform in association with oxygen, so as to avoid all asphyxial complications.

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## STAB AND GUNSHOT WOUNDS.

Thomas A. Cheatham, in a live article on Ambulance Surgery, published in the *New York Medical Journal,* remarks that when called out to attend a patient who has been stabbed, the ambulance surgeon finds everybody excited and overflowing with brainless curiosity; however, his self-confidence and vanity makes it an every-day affair for him to assume absolute charge of the situation, clear away a working space and calmly examine the wounds. If hemorrhage exists, how is best to stop it? Tourniquet? Pressure bandage? Artery forceps? Local applications? Decide and act post-haste. This done, the next thought is, are any vital parts involved? Is the wound superficial or deep? What bloodvessels have been severed? Are any viscera involved? What is the degree of shock? Does the patient need immediate hospital attention? If shock exists, stimulate at once. Superficial wounds are cleansed, swabbed with the tincture of iodine and sutured. If the case is serious, or any doubt exists, control hemorrhage and rush to the hospital, where a careful, unmolested examination may be made. Operative procedures must be based upon symptoms, as stab wounds are lacerations, incisions or punctures, and are more often insignificant than serious. A mental review of the anatomy of the part quickly decides the extent of the injury.

### Gunshot Wounds.

Some one shot! This means anything from mild excitement to a fighting mob and requires even more coolness and deliberation on the part of the doctor than a stabbing case. No time should be lost in locating wounds of entrance which are small and punched out, and wounds of exit, which are larger than the bullet and more or less funnel-shaped. First control hemorrhage by means best adapted to the location of the wound. Above all things, *do not use a probe,* this is an unnecessary, uncalled for, dangerous, and unpardonable breach of the principles of modern surgical technique. The calibre and kind of bullet, its direction and distance traversed, and position of patient should be ascertained. Wounds of the extremities and muscular tissues are not necessarily dangerous, but when a bullet enters the skull, chest, or abdomen, a careful examination must be made before a prognosis can be advanced. Shock requires immediate attention and must be treated before the removal of the patient, whisky, strychnine, and atropine being commonly used. When the hemorrhage is slight, a sterile gauze pad placed over the wound and held in place by a firm bandage is quite efficient as a temporary dressing. Practically all gunshot wounds require hospital treatment, and it is a rare exception to treat such wounds or attempt to remove bullets on ambulance duty. Each case has its individuality, and the advisability of operative measures must be governed by the condition and symptoms. The X-ray is indispensable in locating bullets and aiding the surgeon in deciding upon the advisability of removal.

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# THE DOCTOR HIMSELF.

## THE PERSONAL SIDE OF PRACTICE.

LOOKING over one of the numerous trade journals a day or two ago—we forget just which journal it was—we read the following piece of trade philosophy: "If you think you can keep a man's patronage in your store, and look over his head when you meet him on the street, you have another guess coming." Far be it from us to suggest that the practice of medicine is a trade, or that a physician's professional standing depends upon the extent to which he can ingratiate himself into the good graces of his neighbors. Still further from our mind is any suggestion that any man—be he physician or merchant—should cultivate the good-will of his neighbors for the sake of the business he expects to get out of them.

Nevertheless the profession of medicine resembles the business of a merchant to this extent, that no matter how full one's hands may be of good things which people need, or how ready one may stand to deliver these good things into the hands of those who need them, one cannot force them on his fellows, but can only furnish them on request, and people will not request them unless they feel some kind of trustful and congenial sentiment toward him who has them to bestow. In other words, no matter how well trained or thoroughly equipped the physician may be in a technical way, when it comes to the exercise of his functions he is obliged, like every other worker who deals with men and women, to exercise them through the channels of human nature; else will all his fine training and equipment be just so much glittering but barren decoration, serving no useful, human purpose.

Hence we could not help reflecting that the little squib of trade philosophy which we quoted at the outset applies every whit as much to the practicing physician as to the tradesman. No matter how irreproachable his credentials, the doctor cannot hope to succeed in doing much good with his talents—to say nothing of acquiring much of a competency—who "looks over his patients' heads when he meets them on the street". The older men, especially in the smaller towns, learn this soon by experience. That is one of the reasons why they surpass the younger men. And the young physician who is wise enough to hear and regard the lesson from the lips of his elders invariably passes and outstrips the man who despises it.

However much it may tickle our vanity to regard ourselves in the light of impersonal scientific experts, called in consultation solely on account of our skill and knowledge by persons who feel they cannot do without us—and occasionally, here and there, there may be a man who succeeds along those lines—yet, in general, that is not the way in which the public looks upon us and our services. Humiliating as it may be to the self-conscious physician to contemplate, people regard us as being engaged in a competitive business. They think and talk about "employing" us—in some cases they even speak of "hiring" us. And they naturally prefer to employ an agreeable man to a snob.

But there is a pleasanter side to the matter. The average patient, particularly in the smaller towns and the rural districts regards his medical attendant in the light of a family friend and adviser. Unless he bears out this relation, he does not fulfil his function. And certainly he cannot hold this relation to his clients when he looks upon them impersonally as so many "cases", and gives them the stony stare when he meets them

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outside of professional calls. A person expects more personal interest than that even from the man who furnishes him his meat or his coal; how much more from the man to whom he looks as his counselor and confidant in the most intimate matters of sickness and health. It is not necessary that this matter should be overdone—that the doctor should force himself upon the social life of his patients. But cultivate the personal phase of your professional relations, not alone because of the larger financial returns it will bring, but above all because of the greater scope it will afford you for doing good with the skill and talent that you possess.

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## THE MEDICAL MAN OF TODAY.

James Alexander Lindsay, in his excellent address to the Medical Student's Association of Belfast University, gave a splendid delineation of the qualities of the modern medical practitioner. Among other things Dr. Lindsey said:

The medical man is, no doubt, primarily a healer—that is his indispensable function, but he must also be an educator, a pioneer of progress, a social reformer, a leader of opinion. He possesses knowledge which is useful, not only in the sick room and the hospital ward, but in the school, the factory, the farm, the senate. He must spread the light. "There is no darkness but ignorance," says our great poet, and Schopenhauer speaks shrewdly when he says, "All ignorance is dangerous and most errors must be dearly paid. And good luck must he have that carries unchastised an error in his head unto his death."

### The Qualities of the Medical Practitioner.

I do not claim medicine produces an exceptional proportion of saints or heroes. It does produce some—Dr. McClure does not stand alone; but let that pass. I should rather claim that as medicine sees things as they are—man and nature unveiled—as the medical man is in touch, close touch, with realities, he should be first and foremost a man of common sense, level-headed and discerning, sympathetic but not sentimental, helpful but self-respecting, and he should be specially on his guard against vagaries of thought, opinion, and practice. The history of our art, which is far too little studied, affords many warnings against the follies of medical practice, the fleeting fancies of the hour. The popular folly of the hour just now is that soured milk is a panacea for most of the ills that flesh is heir to, and that if we can only introduce a sufficient number of the *Bacillus bulgaricus* into our large intestine all will be well. And leaders of our profession and eminent scientific luminaries lend their sanction to rubbish of this kind. We shall see how long this fad will endure. Probably it will have a brief day, but when it has "mingled with the infinite azure of the past" there will still remain the fact that buttermilk *does* possess some useful nutrient properties.

But it is often hinted that our work tends to make us callous to suffering. Now, by an absolutely invariable law of human nature the frequent repetition of any impression weakens its intensity. Even the twentieth cigarette is not quite so sweet as the first or the second. The spectacle of disease and death is our daily portion. We come to regard them with comparative calmness. It could not be otherwise, and to quarrel with this fact is merely to tilt against human nature. Yet I think we may claim without presumption that the medical man's sympathy, so long as there is anything to be done, is rarely wanting. His instinct is to act rather than to talk, and perhaps he is not always sufficiently mindful of the fact that there are occasions in life when kind words mean a great deal. But medicine is essentially a sympathetic profession. The Bar can never shake off the taint of contentiousness. The priest is always to some extent a man apart. But the doctor is a man

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amongst men, whose business it is to help them, who stands by them in the hour of their extremity, who places whatever knowledge or skill he may possess at their disposal, and who is often sorry that he cannot do more. "We should neither weep nor laugh at human beings," says Spinoza, "but endeavor to comprehend them."

I think our profession fulfils that ideal at least as well as any other profession. A very eminent living physician once said to me that the most important quality for a practitioner of medicine was—what do you think?—skill? wisdom? courage? resource?—No; but *hopefulness*. Christian Science has played, and is playing, such vagaries before high heaven as might well make the angels weep, but it has done us one service—it has emphasized the importance of the mental factor in the treatment of disease, of the weight to be attached to the expectation of cure and the determination to get well. Hope is, indeed, the sheet-anchor of poor humanity in the dark hour of sickness and suffering, as in other dark hours. There are times in most lives when if it were not for hope—hope that the clouds will some day break, that the dark night will be succeeded by some brightness of dawn—where should we be? Therefore when you enter the sick-room beware of the clouded brow or the mournful voice. You must for the moment at least dismiss your own troubles if you wish to relieve the troubles of others. You must have "a heart at leisure from itself" if you would cheer other sad hearts. Hence, as a profession, doctors are cheerful men by a sort of necessity of the case, an inherited professional habit of mind, for which, perhaps we deserve little credit. The "weeping philosopher" may have his uses in the world, but let him not attempt to practice physic.

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### CALM AND POISE.

If, says Elizabeth Prentiss, you could once make up your mind, in the fear of God, never to undertake more work of any sort than you can carry out calmly, quietly, without hurry or flurry, and the instant you feel yourself nervous and like one out of breath would stop and take breath, you would find this simple, common-sense rule doing for you what no prayers or tears could ever accomplish.

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### THE PLEASURES OF FORTY.

By the age of forty, says an English writer, a man should know what he enjoys, and not continue doing things intended to be pleasurable, either because he deludes himself into thinking that he enjoys them, or because he likes others to think that he enjoys them.

I know now, continues this writer, that I do not care for casual country-house visiting, for dancing, for garden parties for cricket matches, and many another form of social distraction, but that the pleasures that remain and grow are the pleasures derived from books, from the sights and sounds of nature, from sympathetic conversation, from music and from active physical exercise in the open air.

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### "606" IN PARIS.

It appears that Ehrlich's new discovery has its humorous side with our Parisian friends. The Paris correspondent of the British Medical Journal writes as follows:

My readers have not yet heard the last of "606". Unfortunately I must return to this subject, for these figures are causing great trouble to medical men. There can hardly be one *in nostro docto corpore* who has not been the recipient of a letter like the following, which I received quite recently:

Dear Doctor: When could you find the time to call and give me an injection of 606 in the left thigh? People were right in telling me that doctors do not read the papers. Here is a new remedy just discovered, one that is capable of destroying, in the course of one application, all the spirochaetes that I can feel

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moving in my veins, and yet you do not use it! Do you intend to go on much longer playing with your benzoate of mercury, which is hopelessly out of date? Do you think it is pleasant for me to be pityingly asked the name of my doctor, as I was yesterday, when one of my brothers in pathology, who is in my confidence, informed me that he himself was injected with 606 a fortnight ago? You make me look like a fool, doctor, for your treatment is quite out of date. I shall expect you to-morrow morning, for I want to be cured in three days' time. P. S.—Try not to hurt me too much."

The following day I visited my patient and took with me my syringe, the physician's faithful companion since the beginning of time. (Moliere, could he see our modern implements, would be astonished at nothing but their reduced dimensions!) I was about to fill my syringe, when the sick man seized my arm: "One moment, doctor," he said, "have you read *L'Omniloque* this morning? Really, you are a trifle hasty with your doses of '606.' What about Professor Bouchard's article? Don't you think it is impossible to be too careful with these novelties? At any rate, are you quite certain of this preparation of yours? Health has nothing to do with the fashion, and up to now your old treatment did very well. After all, doctor, there is no hurry. The German chemists have not said their last word on the subject, and since they have succeeded in discovering more than 600 products of the same kind, of which the efficacy increases at the same rate that the toxic properties decrease, let us have full confidence in them. Put up your syringe, and, to quote the words of their wise and eminent leader, let us wait for No. 607." I did as my patient wished, and a few days later I met him in the street, so absorbed in the perusal of a newspaper called *La Feuille,* that he ran against me. Without waiting to apologize for his clumsiness, he began at once: "The proof has been made, here is the report of the Congress of Koenigsberg. Two thousand savants from every quarter of the globe have collaborated in the apotheosis of '606.' Out of the 11,000 cases treated by them, there were only 12 deaths, and these were due to other causes, and had nothing to do with the treatment. (After all, there are always eccentrics who lack *savoir-vivre,* are there not?) Moreover, '606' is not only useful in cases of syphilis, but for sleeping sickness, recurrent fevers, and malaria. Ehrlich forbids its use, however, in nervous and cerebral affections. Hear what Alt has to say: Paralytics and consumptives are cured with lightning-like rapidity. After all this, doctor, I have no more objections to undergo this treatment. I will delay no longer, but will go to your next consultation." He did not keep his word, however, and a short time ago I met him again, and asked him why he had not been to see me. By way of answer he swore at the newspapers, declaring that it was entirely owing to the contradictory statements they published on medical questions, and showed me a copy of the *Omniloque,* in which was printed in letters an inch long:

We are certainly the most simple nation under the sun. Dr. Ehrlich's famous discovery is nothing more than an ancient French treatment, abandoned because it proved to be dangerous.

I tried to console him by remarking that we could not be so simple after all if, with Professor Mouneyrat, we had given up the treatment on account of its danger. "That is not the point," he replied; "the question is, how am I to be cured? The reading of all these articles, issued by a thoughtless press, is exactly like submitting to consultations for which I have not asked, and has the same result—I feel more bewildered than ever. Doctor, I put myself in your hands; do what you like. I shall read no more newspaper articles." I told him to take comfort; that his spirochaetes

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belonged to me, as it were, and that I would do all I could for them; and he agreed that that was certainly the simplest way out of the difficulty.

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### QUACKING IN GERMANY.

The Quack flourishes in Germany, according to the Berlin correspondent of The Lancet. This writer says the number of quacks in "practice" in Germany can only be estimated, as there is at present no special legislation requiring them to report their trade to the authorities. It is, however, assumed that the total is not wide of 15,000 persons engaged in this lucrative undertaking. That it is a very good paying business has come out in the course of several trials during the past years in which a quack has played the role of protagonist. The renowned shepherd, Ast, received about 500 patients daily—in fact, at certain hours of the day the trains were crowded with his "patients." Not to be forgotten is the extensive treatment by correspondence also indulged in. One quack was so overrun with patients that he found it necessary to introduce an automatic machine; the client placed in the machine a 10 pfennig piece and received a ticket with a number on it denoting his turn to appear before the gifted healer.

As regards the income derived by these quacks, the trials in which they have figured, and also some collisions with the income-tax authorities, yield a picture of the value of an "unqualified practice." We find mention made of annual incomes of $60,000, $30,000, $25,000, "at least" $15,000 annually during 15 years, down to a mere $200 a month. What is the most surprising aspect of the whole question, and which is especially brought nto prominence by the authorities, is the fact that even the poorest will find means to pay for the services of a quack, and in all cases that have come to light the fee of the quack is considerably above that of the qualified practitioner. The average fee was found to range between 75c to $1.25, for a consultation by letter $1.25, while others are made to pay a deposit of several pounds, for which they will be treated for a certain time. Some extraordinarily high sums have been paid to quacks for a single course of treatment, usually ending disastrously for the patient.

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### THE ARAB LEECH.

In the *Exploring World,* Mr. John Horne gives the following interesting account of his observation of the Arab Leech:

Close by the Arab doctor had pitched his little tent. I looked in vain for pills and powders; his only stock-in-trade seemed to consist of paper and ink and sand to dry it with. Was he a faith healer? Should I witness a miracle, I wondered. But before long my doubts were set at rest. The doctor's method was simplicity itself. Where we go to a specialist, pay a guinea, and get a prescription made up by the chemist, the Tripolitan patient pays a halfpenny—swallows the prescription, paper, ink and all, and goes home—let us hope, vastly the better for it. As I watched, a woman brought her little girl for treatment. The doctor made her sit down before him, and recited a long incantation for all the world like an indifferent Scottish minister "putting up" an extempore prayer. From time to time he touched the girl's bare breast with two fingers of the left hand. Then the prescription was solemnly written, and as solemnly eaten, by the small patient—a copper coin changed hands—and mother and daughter went their way smiling, and perhaps —*chi lo sa?*—cured. Should I propose myself as a "case"? I was in excellent health, but that could make no difference. The leech, however, seemed to divine my infidel intentions; under his disdainful stare my courage failed me, and I fled.

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# THE SICK ROOM.

## PROPER POSITION IN SLEEP.

THE *Healthy Home* declares that the most objectionable position which one can assume during sleep is lying upon the back with the head and shoulders well raised. Sometimes this position is necessary for people with heart trouble, asthma, or other disorders, but when habitually assumed, this position tends to produce round shoulders and a flat chest, besides in some cases producing nightmare, or unpleasant, distressing, or exhausting dreams.

The probable cause is a disturbance of the spinal centers, due to the overheating of the tissues of the back. Many persons also complain of numbness of the limbs when sleeping on the back. These symptoms are due to pressure and strain.

Children usually sleep best who lie prone on their faces, that is, lying upon the abdomen. In many adults who have not used this position for a long time the muscles will become strained and they find it hard to endure. For most people the half prone position, that is, lying upon the side with the body turned well forward, is the one most promotive of the reparative processes which are carried on during sleep.

Lying upon the face is a fine gymnastic training for the diaphragm, as this muscle in each descent is thus compelled to lift the weight of the body. In some cases in which the abdominal muscles are greatly relaxed, it may be found advantageous to place a small pillow or cushion underneath, in such a position as to still further compress the abdomen; that is, the patient lies over the cushion or pillow. The cushion must not be too thick, and should be rather firm, and preferably should be stuffed with cotton or hair. A feather pillow should not be used. By this means the large quantity of blood stagnating in the abdomen may be forced out into the general circulation.

## KEEPING WARM IN WINTER.

By J. WATERLOO DINSDALE, M. D., Los Angeles, Cal.

### The Fallacy of Thick and Heavy Clothing.

Again and again experience shows how much easier it is to persuade people to add something to their usual clothing than to deprive themselves of something with a view to a cure. You can induce more individuals to take drugs for the relief of indigestion than to avoid the foods that cause indigestion; you can induce more individuals to take tea or coffee or something else than to refrain from alcohol. You can induce more people to perform anti-obesity exercise and sweat in Turkish or Russian baths than to abstain from fattening foods and drinks.

And so it is with the search for warmth in winter. People will readily add something—coals to the fire, thick clothes to the skin, heating liquids and solids to the stomach, violent breathing, wavings of the arms and stampings of the feet, and—alas!—stuffiness to the atmosphere of the room; they will not readily make and keep their whole bodies clean and healthy by avoiding the foods that clog them and impede their circulation.

Knowing, then, that it is a more popular plan to do something than to abstain from doing something, I shall begin with some inexpensive practices which readers can add to their daily regime.

### Water Treatments.

First come the water-treatments, with vigorous rubbing and self massage. If you have a strong heart and a good re-

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action the cold water shock may be quite good enough. It is certainly by far the least inconvenient form of water-treatment. Followed by energetic friction, it is likely to be most effective in bringing a glow and hardening you against chills.

There are some who will much prefer the hot or warm bath or wash, followed by the cool or cold, and then by vigorous rubbing. The plan of first hot then cold may be repeated just before bedtime in the form of an alternate bath for the feet. Into one basin put hot water, into another cold water. But the feet in the hot water for two miutes, then in the cold for one minute. Repeat twice. Then dry thoroughly and get into bed. The pleasant glow should last well through the night.

Next come exercises.

Chief among them is deep and full breathing through the nostrils. There are plenty of exercises for the body, arms, and legs to help the different kinds of breathing. But for my own part I find that deep and full breathing without such movements is quite sufficient. The full breath consists of a deep lower inhaling followed, without exhaling yet, by an inhaling during which the ribs expand outwards; then, still without exhaling, the breath is sent to the top of the lungs; there it is held for a moment or two; then it is gradually yet fully exhaled.

There are other useful exercises. The most familiar are stamping the feet or running, swinging the arms across the chest (in cabman fashion), and rubbing the hands. Rubbing the body with a very rough towel after the bath is fine exercise if it is done thoroughly and energetically.

**Virtue in a Stretch.**

Few people, however, know how quick is the effect of an altogether different kind of practice—namely, stretching. Stretch the leg out and stretch the toes well out and down; then keeping the leg stretched out, stretch the heel down, instead of the toes. Do this with each leg in turn. Do it with the arms also, stretching the arm out and then the fingers out, then the "heel" of the hand instead of the fingers. One reason why this makes one feel warm is that it gives a clear passage to blood which before had been too sedentary.

Besides water-treatments, full breathing, and exercises (of which there are many other good kinds—e. g., skipping—instead of the above), there is the help to be got from whatever cleanses the body and makes the blood normal instead of—as it generally is—over-acid. The chief aim of those who want to be warm should be to improve the circulation.

Have you not noticed, for example, how it is nearly always the fat people—those who "stoke" themselves liberally—who want all windows shut, and who pile on themselves coats and rugs? Indeed, the heavier these people are, and the fatter, the more clogged they are likely to be, and the slower their circulation is likely to be.

**Why Patriotic Colors Appear.**

Whence comes the clogging? From several sources, of which the chief is, in my own experience, wrong amounts and wrong kinds of foods. Of course, it is not by starving that one will become warm; it is by choosing foods that will build and warm the body, and by avoiding foods that will clog it.

True, the red, white, and blue,—red nose, white face, blue hands—may be very patriotic, as representing the national colors and encouraging the entente cordiale with France, but these colors are not attractive when worn in these places. And their appearance here is largely due to foods that clog, even if with these foods have been taken foods that feed.

I will not attempt to lay down any laws. It is a matter for each to decide for himself which foods shall be given up altogether, or as a general rule. But

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it is necessary to warn the public against the popular fallacy that the foods which warm us immediately are the foods which keep us healthily warm. For example in many cases hot beef-tea, whisky and hot water, curry, etc., may warm some people temporarily, but may upset them and clog them eventually. The cleansing process, on the other hand, may be very unpleasant and apparently far from successful for the first day or two while the system is cleaning itself of its poisons.

For my own part, I prefer to avoid flesh foods and their extracts, coffee and cocoa, shop sugar, and certain other foods. But other individuals will have different lists. My aim is not to make the list of things to be avoided as large as possible, but to make it as small as possible.

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## BOTTLE FEEDING AND FLAT CHESTS.

W. T. Henson, writing to the *British Medical Journal,* tells how, during the past few years, while devoting his spare time to the subject of infant feeding, he has been much struck, when examining candidates for life insurance, etc., with the fact that in *every instance* that he has been able to elicit the truth the deformed or flat-chested candidate has been bottle-fed as an infant. It seems to the writer the counteracting suction action on the immature chest wall, when the child is made to *suck* its food out of a bottle, is bound to draw in the ribs or sternum. When the child is breast-fed it obtains its food by compression and pulling as a cow is milked, with no suction action whatever, so that the infant is able to inflate its lungs whilst feeding, and thus suction muscles are not unduly developed. This undoubtedly accounts for the fact that babies fed in this proper manner have invariably more regular and beautiful features than when the more artificial method is encouraged. The writer asks those members who have a larger experience in examining for life insurance, etc., to kindly look out for and inquire into the question. He is sure they would be much struck by the result of such inquiry.

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## MAKING THE PATIENT COMFORTABLE.

It is, says Gilman Thompson, a real art to keep a very ill patient who is suffering, let us say, from heart disease and shortness of breath, *comfortable*—to see that the feet have a support, that the back is adjusted at a suitable angle, that the swollen arms are not tired from cramped position, that there is not too much glare of light, or too much gloom, that the glass of water is within easy reach, that the bed is sometimes drawn to the window for a cheerful outlook, that the food tray is at the right height and does not fatigue the patient so that he abandons his half eaten meals, etc.

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## NURSING IN HEART DISEASE.

From the nurse's point of view, says A. Knyvett Gordon in the *British Journal of Nursing,* the tending of a heart case is generally considered to be rather uninteresting work, but it is certain that without skilled nursing true rest is impossible and drugs are of little avail. As a rule, it is best that the patient should be nursed in his own home, as the bustle and noise of a hospital ward are not conducive to recovery, and inasmuch as the recovering (but not recovered) sufferers, have frequently to be discharged to make room for more acute cases, the advantage gained from a three weeks' stay in hospital is often undone by the excitement of his premature removal and by the visits of condoling neighbors when the patient arrives home. Both the sufferer and the nurse have to be very patient, for the results of the rest are not so apparent as in a more acute case, though they are none the less present.

But the nursing is really very difficult, far more so, in fact, than is usually supposed, and it consists in ensuring not

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only that the patient shall not use any muscles unnecessarily, but in removing all sources of mental worry also, and in discriminating between visitors that help and those who hinder.

The next essential is to relieve the circulation by removing anything that obstructs the return of blood to the heart; thus, we have to open the bowels and keep them acting; we encourage the skin and kidneys to act by the administration of drugs that produce perspiration and increase the flow of urine, such as acetate of potash and spirit of nitrous ether. If there is a collection of serum in the abdominal cavity, we remove it by tapping, and we can similarly relieve the swelling of the legs by drainage with small (Southey's) tubes. When the right side of the heart is in difficulties, bleeding from a vein in the arm is often useful.

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### THE BEDSIDE TABLE.

Gilman Thompson, in an address to a class of trained nurses, relates how he astonished a ward nurse at one time by asking if all her patients were left-handed? "How do you mean, sir," said she. "Why all the bedside tables are on the right hand side, and most persons being right handed, more conveniently reach over to the opposite side and not backward to the right." Moreover, there was a patient with a paralyzed left arm, yet he too had the table on the routine side and could not reach anything at all! Further inquiry showed that the tables were so placed by rule, in order the better "to accommodate the *nurses*" in making the patients' toilets in the morning! Routine without thought, without remembering how narrow is the patient's horizon and how much very little matters of comfort mean to him, may represent training and discipline but it certainly does not represent nursing, thought or common sense. The mere name the "trained" nurse is an anomoly which has led to much abuse, and it would be better to speak of the "qualified" nurse, or use some term less suggestive of routine and more suggestive of intelligence.

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### REMOVING WAX FROM THE EAR.

Clayton M. Brown, in the *Dietetic and Hygienic Gazette,* admonishes that in the removal of cerumen one thing must be especially remembered and that is to avoid injury to the middle ear. It is not safe for anyone except an expert to attempt the removal of anything from the external canal by instrumental means, while syringing of the external canal if properly done is not attended with any danger. It must be borne in mind that there is a possibility of a dry perforation existing in the drum. The introduction of fluid, non-sterile through this perforation means a suppurative otitis media which may be attended with grave consequences. It is better to use some antiseptic non-irritating solution such as a saturated solution of boric acid, which should be used at or slightly above the body temperature. A syringe with a soft blunt rubber tip is the safest to use, and if the auricle is pulled back and up the stream will be directed with greater success against the offending body. If a solution too cool is used it is apt to cause pain, while if too hot dizziness and nausea may result,—this dizziness is due to a nystagmus or jerking of the eyeball, and results from a caloric irritation of the semi-circular canals. If the cerumen is not easily removed, a few drops of ether or bicarbonate of soda in equal parts of glycerine and water, introduced into the canal and left there for a few minutes will soften the mass so that it can be easily removed.

The same rules that apply to the removal of cerumen apply also to the removal of foreign bodies from the external canal. No instrumentation should be used, and unless the foreign body is easily removed by syringing the case should be referred to the expert.

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### MAKING THE PATIENT LAUGH.

Dr. Caroline A. Watt writes in the *Mother's Magazine* that the late Dr. Nicholas Senn believed in making sick folks laugh, and sometimes ordered his nurses to see that their patients laughed three or four times a day.

He expected the order to be carried out just as faithfully as if he had ordered strychnine or nitroglycerine.

Laughter is a physical as well as a mental tonic. This is especially true in nervous cases.

In order to make the sick one laugh, the nurse must say or do something laughable.

Most people find it hard to remember jokes and a nurse is apt to forget them quickly because of the seriousness of her work.

One nurse who realized the worth of laughter, kept a joke book, and cultivated the art of telling a funny story. She was cheerful and her patients and friends profited by it.

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### GIVE INFANTS PLENTY OF WATER.

O. N. Hoyt, in the *Medical Council*, relates the following simple but instructive experience. He says: A few years ago I was called to see a six-months' old babe—the first in a Scandinavian family It had fever, had slept little for the last couple of days, and was restless. The mouth of the little one was kept moving and there was a queer expression on the face.

I felt anxious about the child, but prescribed the best I could, and went home. Talking about the condition with Mrs. Hoyt, who is a practical nurse, I suggested that she go and see the child, and see if she could conclude what the trouble was and what was best to do.

She went, and, observing the symptoms for a little time, said: "Bring me a glass of water and a teaspoon, I believe this child wants water." It was brought, and the babe drank eagerly all it was thought proper to give it. This babe was dying of thirst, the mother fearing to give it water, thinking that it might hurt it.

The child was practically well the next day, and was not limited in its needed drinks of water afterward.

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### BE KIND TO THE SICK.

No matter how kindly the attending physician felt toward the sick, says the editor of the *Eclectic Medical Gleaner*, Prof, Scudder still regarded him as unkind if he used harsh medicines where mild and pleasant medication would suffice. In no way would he embitter the illness of a child or drug-torture the incurable if there was a possible mild method of treatment to be used. His ministrations were ever a beatitude to the sick and the suffering.

I have seen so much unkindness to the sick, wrote Dr. Scudder in 1877, and so much suffering from medicine, that I feel justified in frequently reminding my readers that the sick need "kindness," and that medicines should be pleasant to the taste, pleasant in the stomach, and kindly in their effects on the economy. I hear the reply, "O, I am as kind as a doctor can be; I am employed to cure people, and not to give sugar pills." Good! Let us weigh you in your own balances. We will let you take your own medicines for a week or two—your podophyllin, or "compound cathartic pills;" your emetics, nauseants, diaphoretics, diuretics, fomentations, poultices, blisters, irritating plasters, etc., with quinine enough to keep your ears ringing. When you are through you may decide upon the "kindness" of the medicines. We will compare your success with the smallest of "sugar pills," in the range of disease you meet in a year, and then we can determine whether your unpleasant medication "cures the sick."

I shall be answered again with the old adage, "the surgeon's knife is merciful." So it is when rightly used, but how much it has been abused! We congratulate ourselves now upon the success of

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surgical treatment, and the abandonment of the knife where it was thought to be necessary.

I have had quite a long and large experience, and I have fought disease with the old and harsh medicines, and with the new and kindly medicines, and I *know* that the last are the best, even when we take into consideration the saving of life, shortening the duration of disease, and relief of present suffering. I look back on the old methods of drugging, and some people's present methods of drugging, with the same feelings of disgust and horror that I look back upon the thumb-screw, the cat, the rack, and other instruments of torture.

We treat many incurable diseases, and sick. These cases should be carefully diagnosed, and we may determine without any shadow of doubt that harsh and unpleasant means never have and never will give relief. It always comes from the gentler and kindly action of remedies. It is a most unpleasant thought that we have embittered the last days or weeks of life of some friend or relative by drugging, and every patient should stand in this relation to the physician. Let us make a motto of that familiar couplet—

"That mercy I to others show,
That mercy show to me."

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## MENTAL EXERTION OF MANUAL LABOR.

The *Medical Record* refers to the general belief that manual labor involves no particular mental strain. On the other hand, one frequently hears it said that mental work prejudically affects the bodily powers to a much greater extent than does manual labor. Although there is a considerable amount of truth in the statement it must be accepted with certain distinct modifications, for even those who literally earn their daily bread by the sweat of their brow are not wholly exempt from brain travail.

A correspondent of the *London Times*, August 29, argues the case ably for the man with the hoe or axe. He points out that it is impossible to draw a precise line between mental and manual work. Physiologically all work is brain work. All fatigue is really brain fatigue. In other words, all labor is skilled labor, though in greatly varying degrees. The navvy with his pick and shovel has to use skill; so does the docker, loading or unloading barrels, cases, and bales.

There are men who are so constantly engaged in carrying out one little process that they do the work instinctively, almost automatically. The exercise of their skill requires little exertion of body or mind. On the other hand, the watchmaker or the engineer has to keep his mind continually on his work, and although he must use his hands all the time, his brain is being exerted more than his body.

Many indoor trades requiring skill need the employment of brains rather than of physical force. But even the horny-handed son of toil, as the Italian who digs, and delves, and blasts, and the countryman who toils on the land, in these days of machinery must use a good deal of intelligent, as well as expend much bodily, energy. Indeed, it is obvious that brains are required in all trades and possibly on the whole nearly as much mental power is used by the man who works with his hands as he who mainly uses his brains.

The professional man or the business man is generally brought up and educated for his work and thus his brains are trained, while the uneducated individual has, so to speak, to work his brains more, in that they are untrained.

Whether it be work of brain or hand, so long as it is not carried to excess, it is healthy. No healthy man has ever been killed by hard work within reasonable limits, of any kind. More have rusted to death than have been worn out. The work which kills at the present time is the abuse of work, the rush and strain of modern conditions, and, above all, worry, the curse of modern times.

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# REFRACTION.

## TAKING A COURSE IN REFRACTION.

WE HAVE more than once, in these pages, called attention to the large field of usefulness and profit which is open to the general practitioner who will fit himself for, and will undertake. the work of eye refraction. There is no class of medical work which, for so moderate an amount of intelligence and care, yields such uniformly satisfactory and gratifying results to both physician and patient. Unlike every other department of medical practice, it is an exact science, and the precision of its results serves to establish in the patient's mind a feeling of confidence in the physician such as none of the less certain branches of practice can create. Nor is there any class of cases, occurring in the ordinary routine of practice, for which, for the same outlay of time and skill, as large a fee may be legitimately charged and will be as cheerfully paid.

It is a great pity that the general practitioner has neglected and ignored this work, leaving it to the eye specialist, who of course cannot meet the demands of the public—for the need of glasses is more widespread than any other physiological need—and hence it has passed largely into the hands of the opticians, who have in several States secured legislative recognition and license to perform refraction. Such a situation is entirely unnecessary and uncalled for. There is no good reason, except that of an inexcusable "rut," why the general practitioner of medicine should not be doing this work. Everything else being equal, he is the proper and logical person to do it. He is entitled to it by every consideration of right and ethics, and ought to be so by virtue of his qualifications.

Ay, there's the rub. For so many years the work of refraction has been regarded as foreign to the general practitioner's sphere that the medical schools have paid but scant attention to the subject, leaving it almost wholly to the postgraduate colleges, to which a man is supposed to go who proposes to adopt the specialty of the eye; and the medical student himself, accepting the general view of the matter, has been content to let the subject slide, and the result has been that medical graduates have been turned out with practically no working knowledge of refraction at all. So the breach between them and this class of work has widened, until they feel themselves utterly unqualified for it even though they might have an inclination to undertake it.

It appears that the pity of the situation has at last begun to dawn upon organized medicine—due, largely, to the inroads being made by the optometrists in the various States—and a movement is now on foot by a committee of the American Medical Association to promote the practice of refraction by the family physician, and to brace up the teaching of the subject in medical colleges, so that future generations of medical practitioners may be expected to understand and to perform the work. But, in the meantime, what of those men who are already in practice, who realize the advantage a working knowledge of the subject would be to them, who would gladly undertake the work, but who cannot return to school, and can hardly afford the time and money to attend a postgraduate college? And even for those who could and would attend such a postgraduate school, the ordinary eye, ear, nose and throat colleges do not afford the opportunity desired. The practitioner does not want to make himself

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a specialist in eye, ear, nose and throat work—nor even in eye work. He wishes to spend neither the time nor the money in these specialties. He wants only to learn refraction. But the post-graduate schools offer him the whole thing or nothing.

Happily there are, scattered throughout the country, a few good schools of refraction, where the subject is taught thoroughly and efficiently, in the shortest possible time consistent with these two qualities, and at a moderate expense. Some of these will be found in our own advertising pages. The fact that they are outside the jurisdiction of organized medicine detracts nothing of their efficiency, or of their value to the doctor who wishes to equip himself for this kind of work. For those physicians who do not feel that they can leave their practices even for a short time, there are adequate courses in refraction by correspondence, by which any intelligent medical man, with his previous scientific training, can, with a little application, acquire a proficient working knowledge of the subject, to which his personal experience will add all that is necessary. We earnestly urge our readers to take this matter up, and get out of it, for themselves and their clients, all there is in it. It will pay the average physician more, and give him a wider range of usefulness, than a similar course in, let us say, major surgery. For the general practitioner has, in these modern days, but little opportunity to perform major surgery; cases of that kind are, in any event, few and far between; and in order to undertake them at all, the physician must have arduous and expensive training. But cases of eye refraction are more numerous, as we have said, than any other kind; they can always, with patience and care, be worked out to a satisfactory conclusion; and they will always command a fee equal to the obstetric fee of the locality in which the physician practices.

It is because of our conviction on this matter that we conduct from month to month this department of Refraction, by which we hope to promote the practice among our readers and to assist them in their work. It is, however, impossible for us to give, in this limited department, a complete or thorough course of instruction in refraction. We therefore recommend our readers to take a systematic course, wherever and whatever method their judgment directs them. We believe it will be an excellent investment from every point of view. And we stand ready, of course, to render whatever counsel and assistance may be in our power to those who desire to carry out such a course.

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## CATECHISM OF REFRACTION.

(Continued from page 32 in January Issue.)

### Correction of Astigmatism.

Q. What are the chief meridians in astigmatism?

A. As the cornea is a sphere, naturally if one of its meridians be unduly flattened or convex, the meridian at right angles to it will be correspondingly affected in the opposite way. These are called the chief meridians and are always at right angles to each other.

Q. What is the prismatic lens test in astigmatism?

A. Of the rays which pass through the most convex meridian of the eye, the blue rays come to a focus first, while of those which pass through the least convex meridian, the red focus first; and as these two meridians are at right angles to each other, the candle flame, seen through the chromatic lens, appears as two bars of blue and red light drawn out at right angles to each other. This test applies only to high degrees of astigmatism.

Q. What is the significance of the test type in astigmatism?

A. It is certain that rays of light from the distanct type cannot focus upon the retina in both meridians at once, hence the distant type cannot be clearly read by the astigmatic eye.

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Q. Describe the wheel test?

A. The astigmatic wheel or fan is a series of black lines drawn to correspond with the meridians of the eye. It is evident that the line which corresponds to the defective meridian of the eye will be seen, not as a clear black, but as a faint gray or brown. And it is further evident that that spherical lens which will render this faint line clear and black is the measure of the character and degree of the defect in that meridian. We therefore ask the patient to pick out the line in the wheel which looks faintest, and try successively convex and concave spherical lenses until we find the one which renders this line distinct and black. This lens, when found, is the measure of the cylinder which, with its axis at right angles to the faint meridian, will correct the astigmatism. This applies only to simple astigmatism.

Q. What is the stenopaic slit, and how used?

A. It is an opaque disc with a narrow slit in it, the effect of which, when mounted before the eye, is to cut out the rays of light from all meridians of the eye except that which corresponds to the slit. By turning the disc around the slit may be made to coincide successively with all the ocular meridians. Now, if the eye be normal, vision of the distant type will be equally good no matter in what meridian the slit lies. But if one of the meridians of the eye be defective in refraction, then, when the slit is turned to coincide with that meridian distant vision will be poor. It will, in fact, be worst when turned to that meridian and best when turned at right angles to that meridian. If, now, a spherical lens be found which will render vision through the slit, when turned to its worst meridian, normal, then that lens is the measure of the cylinder which, when placed with its axis at right angles to the defective meridian, will correct the astigmatism.

Q. What is compound astigmatism, and how corrected?

2. Compound astigmatism is that form of astigmatism in which the two chief meridians of the eye are both defective in the same way, i. e. both myopic or both hyperopic, so that a lens of the same character, but of different strength, is necessary to correct vision when the slit is at its worst and at its best angle. Now it is plain that if the worst meridian be corrected to the extent of the difference between it and the best meridian, i. e. if it be brought up to the same degree of defect as the best meridian, then the defect in the two meridians being the same, the error is no longer one of astigmia, but of ordinary spherical refraction. The rule, therefore, in compound astigmatism, is to correct the difference between the two meridians with a cylinder, at right angles to the worst meridian, and the remainder of the error with a sphere of the appropriate curvature and strength.

Q. What is mixed astigmatism?

A. Mixed astigmatism is that form in which both meridians are defective, but in different curvatures, i. e. one myopic and the other hyperopic, so that with the slit at its worst angle a spherical lens of one curvature is required to make vision normal, and at the best angle a spherical lens of the other curvature. Now it is clear that if the one of the meridians be over-corrected so as to make it of the same curvature and degree as the other, then the remaining error is a spherical one, and can be corrected with a spherical lens of proper curvature and strength. It is customary to over-correct the meridian of least convexity, i. e. the one requiring the plus lens.

Q. What is the retinoscopic finding in astigmatism?

A. Usually the edge of the shadow is oblique in astigmatism. This, however, is not always the case, especially in vertical astigmatism. The only safe method to follow in detecting and measuring astigmatism with the mirror is to test both meridians, rotating the mirror

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successively at right angles to each chief meridian. Each meridian must then be corrected separately with its appropriate spherical lens, and the proper cylindrical or combined correction estimated in the same way as described in connection with the stenopaic slit. In compound or mixed astigmatism, when one of the meridians has received its spherical correction, the reflection of the retinoscope is usually seen as a band of light lying across the pupil, with its axis subtending the uncorrected meridian. In slight cases this band does not appear, hence it must not be regarded as a *sine qua non*.

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## AFTERMATH OF EYE-STRAIN.

Sydney Stephenson, in *The Lancet*, sets forth the following general considerations of eye-strain and the data upon which our knowledge of it is based:

### How to Recognize Eye-Strain.

Whenever a headache, migraine, vertigo, or "tic" is induced or made worse by use of the eyes and relieved by rest we may safely assume it is due to eye-strain. That supposition is strengthened (paradoxical though it may seem) if the patient possesses sight which when estimated by the test-types is found to be normal or super-normal. It is a suspicious circumstance if headache is complained of after a visit to a theatre or a picture gallery, or a journey by train, tram, or car. There is more than the proverbial grain of truth in the epigram of an American physician who remarked that there was nothing particularly characteristic about the headache of eye-strain, except that the subject rarely suspected that his eyes were at fault. This point has been emphasized anew by Dr. James Hinshelwood, of Glasgow.[2] Then there is the fact that an ocular reflex can often be inhibited for the time being by putting a drop of atropine (or other cycloplegic) into the patient's eyes. Lastly, it can scarcely be repeated too often that no eye can be pronounced to be normal unless its refraction has been estimated by a competent surgeon under the influence of a cycloplegic.

### The Kind of Patient.

Slight errors of refraction are most likely to cause distress in persons who have inherited or acquired an unstable nervous system, the "neuropathic" disposition, as Dr. George T. Stevens called it.[3] In my opinion, this factor dominates the entire question of eye-strain, especially in its severer manifestations. Women and children suffer more readily than men, among whom the highly strung are the more liable. The higher classes are more prone than the lower; the cultured than the uncultured. Clerks, teachers, stenographers, dressmakers, typewriters, students, and others compelled by occupation to use the eyes for hours at a time are particularly subject to the symptoms of eyestrain. The general health of the patient is by no means devoid of influence. It is clear that an error of refraction or of muscular balance is more likely to cause distress if the patient is in poor health, as from influenza, or debilitated, as from lactation or recent confinement. It is not uncommon for the trouble to disclose itself for the first time under such circumstances, even although the underlying ocular defect may have existed from childhood or even have been congenital.

### How Eye-Strain Shows Itself.

By common consent, headache is the commonest reflex manifestation of eye-strain. It has been variously estimated that headaches of ocular origin form from 60 per cent to 90 per cent of all cases of headache. In an analysis of 106 instances of reflex neuroses probably due to the eyes, Dr. H. B. Ellis[4] found that headache was present in 87.7 per cent, digestive and assimilative disorders in 5.7 per cent, blind spells in 3.8 per cent, mental symptoms, loss of memory, &c., in 1.9 per cent, and insomnia in 0.9 per cent. The late Mr. Simeon Snell[5] found that of 800 consecutive refraction cases that came under his notice 162—that is,

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about 1 in every 5—sought advice in consequence of headache.

**The Kind and Magnitude of the Error.**

Of all errors of refraction slight grades of hyperopia, and particularly of hyperopic astigmatism, are those most likely to cause distress. The tendency is greatly increased if the error be asymmetrical as regards the axis of the cylinder or be unequal in the two eyes. On the other hand, myopic defects usually produce poor sight rather than the common reflex manifestations of eye-strain, such as aching eyes or head.

The results of strain are more likely to occur when the underlying error of refraction is so small that it can be mastered for the time being by action of the ciliary muscle. To put the matter in another way, a large error of refraction, which cannot be overcome by those means, leads, as a rule, to defective sight and not to eye-strain. "The smaller the error," it has been aptly said, "the more likely is eye-strain to be present, and also, unfortunately for the patient, the more likely it is to be overlooked."

Patients with eye-strain, then, seldom show any serious departure from normal when their relative visual acuity is estimated at Snellen's test-types, an important point for the physician to bear in mind.

**Method of Estimating the Error.**

The days are fairly outlived when it was seriously taught that an astigmatism of less than 1.00 D., provided it caused no interference with sight, might be safely disregarded. It is now recognized that under some conditions an amount of astigmatism of no more than 0.25 D. or even 0.12 D. may cause intense discomfort. For the detection of such small errors our means of examination can scarcely be too accurate. It goes without saying that the surgeon himself must be well versed in refractions. He must be equipped with suitable lenses, correctly designed trial-frames, and properly illuminated and drawn test-types, and he should be expert in the use of the retinoscope and of other instruments of precision, such as the keratometer. Everything hinges upon exactitude. "It is the little, the inconsiderable thing, in refraction work upon which the relief of the reflexes depends" (George M. Gould).

Now the precise determination of ametropia, especially the low degrees of ametropia, is not possible, I believe, unless the eyes be under the influence of some agent, as homatropine, hyoscin, or atropine, which is capable of paralysing the ciliary muscle, a cycloplegic in fact. In no other way, to my thinking, can the full measure of the defect be disclosed. In young persons, indeed, the accommodation is so active that it may conceal a hyperopia of several diopters, to say nothing of a considerable degree of astigmia. To a certain extent the remark is true of older patients also. Not only must the cycloplegic be of the right kind, but it must be applied until accommodation is placed wholly in abeyance, a point that should always be ascertained by means of a suitable test. Speaking generally, the most trustworthy results are obtained when the selected drug is applied to the eyes by the surgeon himself.

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## A HELP TO EYESIGHT.

Most people begin to notice failing eyesight at the age of fifty or a little sooner. Many people find their eyes "stuck up" in the morning and it is some time before they can see clearly.

Something can be done every day to benefit the eyes without taking up too much time, or interfering with other duties. Take a few drops of sweet oil, or any simple emollient, on the hands, and thoroughly massage the entire face, giving special attention to the region about the eyes. Do not rub the eyeballs, but carefully rub the tissues above and below the eyes with the end of the fingers, drawing the fingers away from the nose outward. Continue this some minutes, then exercise the muscles that

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control the eyeballs, by looking upward as far as possible, then downward, then sideways, in both directions. Do this at least once a day, and as much oftener as may be agreeable.

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### PARTIAL CORRECTION OF HYPEROPIA.

The *Optical Journal* points out that putting on glasses means a disturbance of the relation between convergence and accommodation, and while this relation may not on the average be strong, still it is there, and the annoyance caused by the need of learning a new relationship, made necessary by the wearing of the glasses, may make the act of vision so uncomfortable that the glasses will not be accepted as satisfactory. This makes it necessary to decide how much of the full amount of error found shall be given. For the first pair of glasses in hyperopia, the proportion of full correction given will vary with the degree of the error. Where this is low, full correction can be given, and the same is frequently true in high errors, but in the medium errors one-half of the full amount is a good starter, the same to be increased in subsequent glasses. An excellent way to settle this point is to put on the patient in the trial frame the amount of the correction which, in the opinion of the optometrist, ought to be acceptable, and try them for about ten or fifteen minutes.

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### PROPER FITTING OF CHILDREN'S GLASSES.

Ella G. Hunt, in the *Cleveland Medical and Surgical Reporter,* points out that, if the right glass placed in the right position over an eye will give relief from discomfort, and aid normal development, and as amount and character of this lens correction is changed if relative position of lens and eyes is changed, so a glass placed too high or too low at oblique angle, too near or too far from the eye, will not exactly correct the real error, but may even constitute a graver error and produce overstrain. Children's faces as well as their eyes are growing. The frames that fit to-day will not fit the boy or girl two or three years hence. When the brows have widened and eyeballs increased in size, larger lenses with a greater pupillary distance will be required.

Concave glasses—(glasses for near sight) are decreased in strength, the farther they are placed from the eyes. Therefore it is very important that spectacles do not slip down on the nose, but that flexible spiral temple bars are kept taut.

Convex glasses are increased in strength by increasing the distance from the eyes. This increase if marked may cause fogginess; child will want to remove lenses to see clearer.

Most correcting lenses are given for astigmatism. Any tilting of these lenses will of course cause a change in the axis cylinders. These lenses being given to especially correct certain defective meridians, the tilting will bring correction over wrong portion of the eyeball and the proper correction is lost.

Spherical lenses placed obliquely or tilted, may give effect of astigmatic lenses or prisms.

As a result of this faulty placing of glasses, we often have congestion of the eyeball, or lids with styes, chalazions, etc., added to the headaches and defective sight.

If any of you physicians are on the school board, think somewhat if the length of the school house in the First Grade might not be shortened to advantage. If much near work is injurious and out-door exercise and good sleep so advantageous, might it not be well for us to insist on no night work for little ones and less for the older ones? Suggest to teachers for the early school years less written work, more cultivation of ear, memory by sound as well as sight. Even if 5-6 of our impressions

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do come through the eye, the wonderful work done for blind, shows what the ear can do. Teach the little ones by sound. It will help them in their music, to learn foreign languages, to fasten many a bit of poesy or prose, fact or fancy in their memory.

Advise that all children's eyes at least be examined before entering school and at intervals later. If not possible that these examinations be by competent oculists, at least train teachers to use test cards. This will discover the worst cases and will prevent or limit high grade myopia. Advise frequent change of work, variety of focus. It has been found that even the mind of a child cannot concentrate itself for any length of time on one subject; average time for child of six to eight years being eight minutes, and then several aspects of subject must be presented to keep his entire attention. This is a safeguard to eyes Alternate near work with work for distance, resting eyes.

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## PICTURE FILMS FIGHT TUBERCULOSIS.

Moving picture theaters have been enlisted in the army of crusaders fighting tuberculosis by selling Red Cross Christmas Seals, and on December 16th in all parts of the United States a film entitled "The Red Cross Seal" was exhibited for the first time, according to an announcement of the National Association for the Study and Prevention of Tuberculosis.

The picture drama has been produced by the Edison Manufacturing Company in co-operation with the National Association for the Study and Prevention of Tuberculosis and the American National Red Cross. It portrays an interesting story of New York life, and is besides filled with educational scenes that show how tuberculosis is contracted and how it may be prevented and cured. The film is 1,000 feet long. The tuberculosis workers in every state of the United States are urging their local theaters to exhibit the picture.

The plot of the story centers about the winning of the prize of $100 for the best design for the Red Cross Seal for 1910, by Ellen Williams, a poor girl of the tenements who makes her living by decorating lampshades for very meagre wages. She has applied to the art school where she longs to take a course of study, but finds that the cost, $100, is too much for her purse. As she turns to leave the school, a young man of wealth sees her in the office and is struck by the pathos of her beauty and disappointment. Tired of his purposeless life, Jordan resolves to see for himself "how the other half lives." Dressed as an ordinary day laborer, therefore, he rents a room in the same tenement with Ellen, and soon becomes greatly attached to her. He sees her struggle to win the $100 prize for the Red Cross Seal design, and finally sees her win it. Then he sees her give up all the ambitions of her life, when she turns over the $100 to a neighbor, so that her consumptive boy might have a chance to be cured at a sanatorium.

Struck by the noble sacrifice, Jordan unknown to Ellen, buys the tenement, renovates the neighboring apartment, enlists the co-operation of a district nurse, and helps thus to restore the consumptive to health and remove from his family the danger of further infection.

Thus, in the end, when Jordan reveals to Ellen his identity, she finds in his proposal that she share with him his palatial Fifth Avenue mansion, she has gained a great love, a home, and the satisfaction of her ambition, all because of the Red Cross Seal.

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**Vomiting.—**

Creosote is recommended in the following form for the relief of vomiting, from whatever cause:

| | |
|---|---|
| Creosoti | m. x |
| Acidi Acetici | m. xx |
| Morphini Sulph | gr. ss |
| Aquæ q. s. | oz. j |

A teaspoonful every half hour for three or four doses.

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# MEDICAL PHARMACY.

### HEGONON, A NEW SILVER COMPOUND.

KLINGMUELLER, in *Muenchner Med. Wochenschrift,* reports the results of his comparative clinical experiments with hegonon and other silver proteid compounds.

The new compound which is obtained by treating albumose with an ammoniacal solution of silver nitrate, is a light brown powder, readily soluble in water, and containing approximately 7 per cent. of organically combined silver. Its aqueous solutions do not coagulate albumen, even on heating, and are not precipitated by sodium chloride. The indications of hegonon are the same as those of other silver proteids. So far it has only been systematically tested in gonorrhea, in which ¼-per-cent. solutions have yielded excellent results, recourse to higher concentrations appearing unnecessary. In this concentration the solutions are almost colorless and cause practically no staining.

Of thirty-eight cases of simple anterior gonorrheal urethritis, treated with hegonon, not a single one developed complications (posterior urethritis, prostatitis, epididymitis). Klingmueller also finds that complicated cases of gonorrhea, originally treated with hegonon, show a prompter disappearance of the organism than those in which the other preparations were used. He concludes from his experiments that hegonon deserves first place among modern silver proteid compounds.

### IODIPIN TO REPLACE THE IODIDES.

Forscheimer, in the latest edition oi his "Prophylaxis and Treatment of Internal Disease," declares that on account of the fact that with all precautions there will now and then be found an individual who cannot take the minutest dose of the iodides the following substitute may become necessary:

"Iodipin, introduced by H. Winternitz, is produced by dissolving iodine in sesame oil that has been acted upon by iodine monochloride. It can be given internally in 10-per-cent. strength or subcutaneously in 25-per-cent. solution." He states that "it certainly fulfills all the indications of iodine in the most advantageous manner. Whether it meets all the requirements for the treatment of syphilis remains to be seen."

### TREATMENT OF CARBOLIC ACID POISONING.

Burke, in the *New York Medical Journal,* states that the best antidote is a cupful of alcohol and water (four ounces of each) given by mouth and removed at once with stomach tube, if possible, syphoning it out. If the stomach tube cannot be used, give apomorphine hydrochloride, 1/10 grain, hypodermically. (Omit evacuate treatment if corrosion is severe and limit the total quantity of alcohol to four ounces well diluted.) The alcohol protects the stomach from the corrosive action of the carbolic acid probably by its dilution of the carbolic acid, its effects upon the walls of the stomach delaying or preventing absorption. It also acts as a stimulant. Apomorphine not only has a prompt emetic effect upon the more or less paralyzed stomach, but also controls any inclination to acute alcoholism. (Owing to the anesthetic condition of the mucous membrane of the stomach, emetics are, as a rule, not very effective.) If alcohol cannot be procured, use a cupful of clear whiskey, brandy, gin, cider vinegar, or rum for the alcohol they contain.

The administration of the alcoholic preparations followed by evacuation of

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the stomach should be repeated every five of ten minutes, from four to eight times, according to the severity of the poisoning. Washing out freely with much water is also good secondary treatment. In the absence of alcohol, a very dilute acetic acid has been employed. Owing to their albuminous nature, milk or white of eggs may be used with benefit.

The next step is to administer some of the soluble sulphates, such as sodium or magnesium sulphate (in from one-half to two-ounce doses in a cupful of water) to hasten the elimination of such portions of the carbolic acid as may have entered the circulation. Half a pint of such a solution, of one-fourth the before-mentioned strength, should be left in the stomach for continued absorption.

Stimulate the heart, circulation and respiration by atropine sulphate (from 1/100 to 1/60 grain) and inhalations of amyl nitrite (from 3 to 5 drops) crushed in a handkerchief. Hypodermic injections of sulphuric ether may be employed. Strychnine or digitalis may be helpful. Artificial respiration is often required. Body temperature should be maintained by placing hot water bottles around the patient. Give demulcents as an after-treatment to soothe and protect the mucous membrane. The best of these seem to be milk and eggs, and they not only soothe but nourish and sustain the patient. Also apply mustard paste to the abdomen and employ friction to the limbs.

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## THE CARBOLIC COEFFICIENT OF ESSENTIAL OILS.

Since the value of essential oils in their application, at all events, to medicine, depends probably upon their antiseptic power, the determination of this power is important. Following *The Lancet* method which was set out in the report of *The Lancet* Commission on Disinfectants, with slight modifications, Mr. W. Harrison Martindale has recently published an interesting series of figures which purport to give the phenol coefficient of the chief essential oils, in an article published in the November number of the *Perfumery and Essential Oil Record*. The results are summarized in the following table, the carbolic acid coefficients there recorded being the mean of the two results obtained with 2 minutes' and 30 minutes' contact, respectively:—

| Essential oil dilution. | Carbolic acid coefficient |
|---|---|
| Origanum oil (aqueous) | 25.76 |
| Thymol (saponaceous solution) | 25.29 |
| Carvacrol | 21.32 |
| Thymol (in aqueous solution) | 19.41 |
| Thyme oil (in soap) | 14.85 |
| Thyme oil (aqueous) | 13.38 |
| Geraniol (in soap) | 12.29 |
| Cinnamon leaf oil (in soap) | 9.66 |
| Oil of cinnamon cortex (in soap) (52 per cent aldehyde) | 8.91 |
| Oil of cloves (in soap) | 8.88 |
| Cinnamic aldehyde (in soap) | 8.02 |
| Citronellol (in soap) | 8.11 |
| Oil of cinnamon (82 per cent aldehyde) (in soap) | 7.92 |
| Rosemary oil | 5.94 |
| Otto of rose (in soap) | 5.94 |
| Cassia oil (in soap) | 5.94 |
| Wintergreen oil (in soap) | 4.64 |
| Eucalypt. amygd. (in soap) | 4.35 |
| Lavender oil (English) (in soap) | 4.94 |
| Lemon oil (in soap) | 3.94 |
| Almond oil (in soap) | 3.76 |
| Eucalyptol (in soap) | 3.76 |
| Eucalypt. glob. oil | 3.55 |
| Light oil of tar (rectified) | 2.17 |
| Santal oil | 1.67 |
| Birch tar oil | 1.67 |

*The Lancet* points out that in the majority of instances the oils were tested in saponaceous solution—that is to say, a limpid solution which throws out on dilution the oil globules in a fine state of subdivision. There is no information given as to the relative physical condition of the emulsions tested, and it is apparently assumed that the state of subdivision in all cases was the same. If that was not the case, the relative values of the oils in regard to carbolic coefficiency may not necessarily be dependent upon the essential constituent, for undoubtedly a greater inhibitory action on organisms is shown by a perfectly uniform emulsion, in which the separated particles are exceedingly fine, than by an emulsion which exhibits irregularities or suspended particles varying in dimensions.

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## ARTIFICIAL SALTS.

The *Medical Council* gives the following formulæ for the preparation of artificial salts:

**Sal Carolinum Factitium.**

(Artificial Carlsbad Salt.)

| | |
|---|---|
| Potassium sulph | 2 grams. |
| Sodium chloride | 18 grams. |
| Sodium bicarbonate | 36 grams. |
| Sodium sulph. (dried) | 44 grams. |

Triturate the ingredients to a fine, uniform powder.

Uses: Purgative, refrigerant, diuretic.

Dose: 90 grains (6 grams) a heaped teaspoonful in 6 fluid ounces (200 c.c.) water representing an equal volume of Carlsbad water.

**Sal Kissingense Factitium.**

(Artificial Kissengen Salt.)

| | |
|---|---|
| Potassium chloride | 17 grams. |
| Sodium chloride | 357 grams. |
| Epsom salt | 59 grams. |
| Sodium bicarbonate | 107 grams. |

Triturate the ingredients to a fine, uniform powder.

Uses: Diuretic, purgative, refrigerant.

A solution of about 24 grains (1.5 grams) of this preparation in 6 fluid ounces (200 c.c.) of water represents an equal volume of Kissengen water in its essential constituents.

**Sal Vichyanum Factitium.**

(Artificial Vichy Salt.)

| | |
|---|---|
| Sodium bicarbonate | 846 grams. |
| Potassium carbonate | 38.5 grams. |
| Epsom salt | 38.5 grams. |
| Sodium chloride | 77 grams. |

Triturate the ingredients to a fine, uniform powder.

A solution of about 14 grains (1 gram) of this preparation in 6 fluid ounces (200 c.c.) of water represents an equal volume of vichy water in its essential constituents.

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## REMOVING MEDICINE STAINS.

The *Medical Press* gives the following useful directions for removing stains made by various medicines:

Stains of iodine are easily removed from the hands and linen by moistening them with ammonia or a solution of hyposulphite of soda.

Nitrate of silver stains are rapidly effaced by a solution of cyanide of potassium or of iodide of potassium. The yellow stains resulting disappear completely with hyposulphite.

Chrysarobin stain may be treated with chloroform or proof spirit, while that of resorcin is removed by a solution of citric acid.

Picric acid is amenable to a solution of sulphite of potassium, applied for about one minute, followed by washing the parts with soap and water.

The stains of pyrogallic acid seem to be refractory to all chemicals.

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## PRESCRIPTIONS FOR MIGRAINE.

The *Clinical Journal*, of London, England, prints the following prescriptions for this troublesome malady, which have often proved useful in Rankin's practice:

a.

| | |
|---|---|
| Chloride of ammonium | 15 grains. |
| Phenacetine | 10 grains. |
| Codeine | ⅓ grain. |

(To be dispensed either in the form of a powder or of two cachets.)

b.

| | |
|---|---|
| Antipyrine | 10 grains. |
| Salicylate of soda | 10 grains. |
| Tincture of gelsemium | 15 drops. |
| Spirits of chloroform | 15 drops. |

Water, one ounce.

c.

| | |
|---|---|
| Heroin | 1/12 grain. |
| Hydrobromic acid (dilute) | 30 drops. |
| Citrate of caffeine | 5 grains. |
| Comp. tinct. cardamom | 20 drops. |

Chloroform water to one ounce.

In the case of all of them directions should be given for a dose to be taken every two hours for three doses; and every four hours thereafter until the pain is relieved. In women, when the migrainous attacks recur only at the menstrual times, the use, for a week before each period, of a mixture of chloral hydrate, 10 grains, and a bromide of sodium, 20 grains, given three times a day, is often successful, he states, in suppressing the attack or in diminishing its severity. When the temporal artery on the affected temple is prominent and throbbing, steady pressure over it may succeed in affording temporary relief.

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# ELECTRO-THERAPY.

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## CHRONIC URETHRITIS CURED BY THE X RAYS.

DU BOIS, of Geneva, has brought before the Societe de Radiologie Medicale of Paris (*Bull, et mem.*, February, 1910) three cases of chronic urethritis which have been cured by x-ray treatment. It was as a last resource that he used the rays in the first of these cases, but the result was so remarkable that he has since made the application systematically.

A man, 35 years of age, consulted him for a blenorrhagic infection dating back for six years. During the acute period he had been treated with injections and balsams, and after two months of treatment, the more evident symptoms having disappeared, he was regarded as cured. Two years later some urethral secretion appeared each morning at the meatus, and this condition persisted for a long time without interrupting the genital activity of the patient, until the advent of pain and haemorrhage on erection. The examination of the urethra showed a yellowish-grey discharge containing some colonies of the gonococcus. The urine contained filaments of mucopurulent deposit.

The diagnosis of chronic gonococcal urethritis affecting the anterior urethra was made, and it was confirmed by the fact that upon palpation there was a stickiness of the canal in the centre of the spongy region, extending for a length of 2 cm. Palpation brought to the meatus some secretion tinged with blood. The urethroscope showed a red mucous membrane, swollen, papillomatous, and bleeding easily. Local cauterization did nothing but irritate the region, augmenting the discharge and the haemorrhage.

After four months of profitless essays, Du Bois applied the x-rays upon this region (3 H.: 5-6 Benoist). The abdomen was carefully protected by a sheet of lead. Ten days after this application the discharge had disappeared; there was no more haemorrhage with the nocturnal erections, and the infiltration had almost vanished. Encouraged by this result, he again applied a dose of 5-H. from the same tube at 15 cm. from the skin. The result was immediate, and for three and a half months, or up to the time of Du Bois's communication to the society, the urethra had remained supple, and there had been no more discharge or haemorrhage.

Du Bois has since applied the same treatment to two patients attacked by chronic urethral folliculitis, with the same result, obtained more rapidly, because in these cases the inflammation was less severe and less chronic, and also because the dose of 5 H. was applied in the first instance. Lenglet, following Du Bois, states that he has had occasion to experiment three times during the last four years upon the action of the x-rays upon chronic urethritis. In two of these cases he obtained successes, and in the other there was no appreciable modification. In each of these cases he irradiated, at the same sitting, the anterior and posterior urethra. The dose given was 3-4 H., with rays of 6-7 B. Great care was taken to protect the surrounding parts. In the two successful cases the first phenomenon after this treatment was the stoppage, on the first or second day, of the special sensation at the fossa

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navicularis. Accentuated chronic prostatitis was the reason for non-success in the third case.

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## PREPARING $CO_2$ SNOW.

S. W. Allworthy, in the British Medical Journal, points out that many good methods for collecting the snow have been suggested, some simple and others elaborate, and excellent apparatus has been invented and prepared by different makers to prevent waste, and to obtain easily a hard pencil or stick of the solid snow. One simple but highly essential and practical point requires emphasis, and, unless understood, some may procure cylinders and collecting apparatus, and yet meet with disappointment in not being able to obtain any snow. When the valve of the cylinder is opened, the liquid carbon dioxide must be forced out, and not simply a jet of high-pressure gas. It is a portion of the liquid gas which solidifies in the form of white snow-like flakes, and this is caused by the great absorption of heat produced by the very rapid evaporation of another portion. Consequently the cylinder must be placed on a stand upside down, with the valve at the bottom, as in Fig. 1, or in an inclined position, as in Fig. 4, so that the liquid gas is gravitated down to the nozzle end, and must of necessity be forced out when the valve is opened. The cylinder, if fitted with a central siphon tube (Fig. 2), may be kept in an upright position, and in a stand similar to that supplied with oxygen cylinders. As this siphon tube is attached to the nozzle, the pressure must first press out the liquid $CO_2$ from the bottom of the cylinder. If the cylinders are placed as in Figs. 3 and 5, the gas will simply rush out with great noise and be wasted. The cylinders used by aerated and mineral water manufacturers are usually about 5 ft. in length, and contain some 27 lb. of gas. This large size cannot well be inverted, and, if used, must be placed on a suitable stand, as in Fig. 4 position. Smaller cylinders of 7 lb. capacity, however, are being supplied by most of the carbonic acid gas companies, and are, therefore, more convenient. The pressure or tension contained in the cylinders is from 850 to 1,000 lb., but varies, of course, with the temperature. The cooler the atmosphere the lower the pressure. On an average it is probably about 950 lb. to the square inch, or 65 atmospheres. Liquid $CO_2$ has a coefficient of expansion larger than that of any known body, and its boiling point is —72.2° under a pressure of 760 mm. The temperature of the snow is 79° below zero (Centigrade).

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## ZINC-MERCURY CATAPHORESIS IN CANCER.

Betton Massey, of Philadelphia, is the pioneer in the study and application of zinc-mercury cataphoresis. In his method a zinc pointed electrode is amalgamated freely with mercury and immediately passed into the periphery of a cancerous growth, with its point directed towards the centre. The current is then turned on, and when about 150 milliamperes have been attained another electrode is inserted near the first, and this procedure is followed with every raising of the current until four or five electrodes, all connected with the positive pole, are acting simultaneously with a current having a total strength of 600 or 800 milliamperes. At the recent Congress of Physiotherapy in Paris, Massey made a communication upon his method. He stated that the operation could be either monopolar or bipolar. In the former the patient lay on a couch of kaolin, with beneath him a thin plate of metal attached to the negative pole of the apparatus. The maximum currents to be used in a monopolar operation were:

| | Milliamperes. |
|---|---|
| For head, mouth and neck | 300— 400 |
| Left breast | (feeble application) |
| Right breast and thorax generally | 400— 800 |
| Below waist | 800—1,800 |

The ions of the two metals—zinc and mercury—are pushed into the tumour, and unite with the albumen and other

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constituents of the cells and intercellular substances to form a whitish-grey zone of destruction. In the bipolar operation the procedure is similar to the monopolar, except that the kaolin couch is not employed, and that the negative pole is placed in the centre of the tumour. This pole is a metal instrument of special form, bearing a small tampon of absorbent taffeta soaked in a dilute solution of sulphuric acid. The bipolar operation should be employed in preference to the monopolar whenever possible, because with the former much more current can be employed without harmfully affecting the patient, thus lessening the time of operation and producing a much more complete destruction of the tumour and its surrounding colonies. Massey claims for his method certain advantages as compared with excision by the knife, the chief being that the cells or cancerous elements are immediately destroyed *in situ*. There is no loss of blood, save in the rare cases of secondary haemorrhage, when important vessels are comprised within the zone destroyed, and the method permits of a strictly localized destruction of the tumours. Compared with radiotherapy, if immediate ionic destruction is possible, the employment of x-rays is foolish, but if the surface of the wound is large and its depth slight the x-rays are preferable. Otherwise, an alternating method of ionic-therapy and radio-therapy may be useful.

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## RADIUM THERAPY IN EYE DISEASES.

Lawson and Davidson, in the *British Medical Journal*, express the conviction that radium will prove of great service, both in the treatment of external diseases of the eye and in those of the eyelids. The results are in many ways most encouraging, and the field of utility for radium in eye disease has widened considerably since the time that it was first shown to be a specific for rodent ulcer.

### Method of Application.

The method of applying the radium was crude but satisfactory. The eye was first cocainized and the radium, which was contained in sealed glass tubes permitting only the passage of beta and gamma rays, was applied directly to the affected part. The fingers of the operator were protected by enveloping first that part of the tube not required and then the fingers in a thick, continuous wrapping of lead foil.

The process is tedious, especially as care must be exercised to keep the tube in close contact with the part desired to treat which is often very small, but no more efficient way could be devised.

### Length of Exposure and Dose.

There are two points, say these authors, to which we should, in the first place, like to draw attention. First—and this is of vital importance—in no single instance have we observed the slightest ill effects from the use of radium. We have, of course, exercised caution, especially when dealing with the eye itself, and it is probable that when the actions and dangers of radium are more fully understood there will be a much greater freedom in repeating the sittings than we thought advisable.

The second point is that no increase of inflammation or aggravation of symptoms occurred in any case, with the one exception of pain, and which, when it occurred, was usually transient and not severe.

It is, of course, of the utmost importance, in dealing with a substance such as radium, that at the earliest possible moment positive rules as to the size of the dose to be employed and length of the sitting, as well as the frequency with which the sittings should be repeated, should be laid down for the guidance of the inexperienced.

At the present time it is unfortunately impossible to give more than a few general indications, and to point out by results obtained the most likely road to a successful issue.

With regard to the eye itself, we had no basis upon which to found our ob-

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servations, so we thought the best plan would be to fix a time limit which would not endanger the integrity of the eye, however large a dose it might be considered desirable to try. Mr. Mackenzie Davidson's experience with radium here proved the deciding factor, and an exposure of five minutes was fixed as being absolutely safe.

With regard to the dose itself, it will be obvious to anybody glancing over the appended statistics that very many and varied doses were employed. We were chiefly guided as to dose by the character of the lesion to be treated, considering that one exhibiting a tendency to spread or infiltrate surrounding tissues, or marked by any special virulence in its progress, would probably require a larger dose than a small, superficial, or non-infiltrating lesion. Further, being anxious to try the effects of as many variations as possible, we in many cases used a different dose for the second sitting to what was employed in the first instance.

It soon became evident that lesions of the cornea could be treated successfully with this time limit of five minutes by the same dose which, for affections of the skin and lids, required an exposure three or four times as long, and also that superficial lesions of the cornea frequently do not need any more than quite a small dose, such as 5 to 10 mg., applied once or twice as the case might demand.

Looking back upon our experience, we think that a supply of 20 mg. is sufficient to combat any external affection of the eye in which radium is likely to be of service.

**Frequency of Exposures.**

With regard to the frequency with which the exposures were repeated, we were guided entirely by the progress or otherwise of each individual case.

When dealing with a virulent and highly dangerous process, such as a hypopyon ulcer, it was obviously necessary to get a result with the least possible delay, and consequently the exposure was repeated as soon as was considered safe, if no improvement had been noted. Whereas, in milder cases, we were content to wait longer for signs of amelioration, being anxious to find, if possible, the minimum number of sittings necessary to effect a cure.

The effects of radium are continuously exhibited for a considerable space of time, extending into a matter of six weeks at least, and so some of our cases had only one sitting, and a perfect cure resulted.

The margin of safety with regard to the minimum interval that should elapse between the sittings must obviously depend upon the dose employed. The larger the dose, the sooner should its effects be produced, and the longer the interval between the sittings. Consequently, if a large dose was considered necessary at the first exposure, we seldom repeated it with less than a week's interval, except it happened to be noted that the disease continued to spread in spite of the treatment, in which case we considered that a second exposure might safely be given at a rather shorter interval.



## CHOICE OF X-RAY APPARATUS.

J. N. Scott, in the *American Journal of Physiologic Therapeutics,* says that for taking X-ray pictures there is no doubt that a coil of from twelve to fifteen-inch spark length and wound to give a heavy discharge in the secondary, also with a very heavy winding in the primary, or several wires wound so they can be connected in multiple, is preferable. It should be capable of carrying from fifty to seventy-five amperes of current through the primary when used with the electrolytic interrupter having from two to five points. Such an instrument will meet the requirements for radiographing any part of the body in from one to ten seconds. The chest and thinner portions can be made by a flash of about half a second. Besides the sav-

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ing of time an instrument of this description will take pictures showing detail which cannot be obtained by the slower methods.

For therapeutic work this instrument should have the primary wound so it can be thrown in a series of four layers or a multiple series of two layers, and used off a vibrating interrupter, mercury interrupter or other mechanical form. This same instrument can be used to operate high frequency apparatus, but it will not take the place of a static machine. The currents from the induction coil and high frequency apparatus connected to it, have therapeutic effects of their own, and will not produce the therapeutic currents obtained from a static machine, although many of our manufacturers would lead us to believe that they will.

For the physician who only cares to use an apparatus occasionally in the examination of fractures, etc., and desires to use static electricity in his practice, and does not care to expend sufficient money to buy both coil and static machine, he will be able to do a great deal of work with the static machine, and it will answer his purpose very well, but he cannot obtain the detail in X-ray pictures that would be obtained by a good coil unless he has a very large static machine, consisting of about forty-eight plates, and for the amount of money that this machine would cost, he could buy a static machine which would serve all purposes for treating with static electricity and a coil besides. The static machine is inferior to a coil for obtaining the therapeutic effect of the X-ray, because its output varies from hour to hour and he cannot control the dosage to as fine a degree as he can with a coil.

One cannot obtain the effects of high frequency apparatus from the static machine direct, but a high frequency apparatus can be operated from the static machine and will produce the same effects as if a coil were used for the source of current. However, the power and volume of the high frequency current will not be as much from the average size machine of from twelve to twenty-four plates, as will be obtained from a good twelve-inch coil. Each apparatus has its place. No coil will do the work of a static machine, neither will any static machine do the work of a coil.

If a physician only expects to buy one instrument, the one which he will use the most and derive the most benefit from will depend upon his work. If he is a general practitioner in a small place he would probably do more work with the static machine, but if he was in a city and expected to be able to do general X-ray work and do it well, he should have the coil.

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## CLINICAL USE OF GALVANISM.

J. K. Hamilton, in the *Cleveland Medical and Surgical Reporter,* states that in his practice he has found the following conditions to be wonderfully influenced by galvanism.

Chronic Gonorrhœa. If there are strictures in the urethra and these are not too ancient they can be absorbed by the use of the negative pole attached to sounds or preferably bougies of copper, using a large abdominal pad for the positive pole. Use more time than force, and a weak current and long intervals. If there is no stricture the author uses a urethral electrode containing a strong solution of protargol or argyol to the negative pole and a copper rectal to the positive. He has had good results from this treatment in stubborn cases that have resisted other forms of treatment.

In gynecological cases we find the galvanic current often useful and curative in troublesome conditions where there are no gross pathological lesions. When such lesions exist it is clearly the part of wisdom to remove them if possible. However, there are many cases come to the physician for relief when surgical interference is refused or postponed. Many of these cases may be made more comfortable by the use of galvanism.

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In dysmenorrhœa it accomplishes much in overcoming cervical stenosis and allaying chronic inflammation of the tubes and ovaries. In women suffering from the results of former attacks of inflammation of the genital organs where there is considerable inflammatory exudate interfering with the circulation and causing congestion and pain, much good can be accomplished by the intelligent use of this agent. When such a condition can be brought about, by means other than surgical, it is preferable to do so. The author has never attempted to electrocute extrauterine pregnancy, fibroids, or cure cancer by this agent, as he prefers the scalpel for these conditions.

In chronic articular rheumatism and gout this remedy is useful, carrying potassium to the afflicted points by phoresis. The infiltrate disappears, the joints resume their function and pain is relieved. The treatment to be beneficial requires time and patience. Constitutional treatment certainly should not be neglected at the same time. Enlarged glands from whatever cause except malignancy respond nicely to this line of treatment, providing, of course, they have not already broken down.

In dermatology we use this current for the removal of superfluous hairs and small facial blemishes such as warts, moles and small naevi.

The power of the positive pole to coagulate blood has been successfully proven in the treatment of aneurysm where ligature of the artery is contra-indicated.

In the use of the galvanic current a good milliampere-meter is necessary to indicate the strength of the current. The author's best results have been secured from the weaker currents for longer periods of time. In fact the consumption of time is the greatest obstacle to the employment of electric treatments of all kinds. A separate room for the treatments is the easiest solution of the problem.

## TECHNIQUE OF IONIC WORK.

Betton Massey, in the *American Journal of Physiologic Therapeutics*, advises that minor ionic surgery, *i. e.*, the diffusion of ions from solid needles, requires only the simplest galvanic, or constant current outfit. Merely a proper controller and meter, if a direct current incandescent service is obtainable, costing at most about fifty dollars, to which should be added about 30 dry cells if the current mains are not available. Such an outfit will answer the purpose of gynecology and general work also.

With such an outfit, together with some fine wire (No. 32 Brown and Sharpe gauge), to attach to size needles cut from ordinary thin sheet zinc with a pair of tinners' pliers (the wire being attached to the butt of the needle by wrapping it about the latter and clamping the end of the needle over it); and a little quicksilver to dip the point of the needle in after dipping it in weak sulphuric acid, we have an apparatus that enables us to sterilize by zinc-mercury ionization many incipient epitheliomas in various parts of the body. The result may be accomplished either in one application of a half-hour duration, or only after many repetitions. If this be so, how unscientific to leave these cases to produce metastasis by delay!

Allusion is not made to the major ionic application, for which technical skill is needed, but to the smaller external growths which are often successfully treated by a prolonged series of X-ray applications. How much better to use this simple agency, with results attainable at times in a few minutes! In large, flat epitheliomas of the skin, penetrating but slightly below the surface, the rays will continue to be the best remedy.

Small growths within the mouth are often equally amenable to minor ionization applications. Here the X-ray is powerless, as it is also in rectal growths. In these latter a major ionic application is necessary.

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In hemorrhoids a similar minor ionization technic will be successful in 15-minute applications, repeated from two to six times at intervals of five days. The technic here requires that all of the needle except about a fourth of an inch from the tip shall be insulated by coating it with fused sealing wax. This is readily done by bringing the needle and wax in contact over an alcohol flame. Simple zinc ions, that is, ions from a zinc point uncoated with mercury, are all that is necessary to produce an occlusive plastic action in hemorrhoidad tumors.

By a nearly similar technic, we may cure tubercular glands in the neck and tubercular sinuses, the number of applications needed in each varying from six to twenty-two. Here the mercury ions are a valuable addition to the zinc, dissolved from a blunt sliver of zinc coated with quicksilver and inserted into the open sinus. When the gland has not broken down and the skin above it is unaffected, an opening should be made for the electrode, under the local application of cocaine. The duration of these applications in non-malignant conditions should be fifteen minutes; in malignant growths not less than double this time.

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## GAUGING X-RAY PENETRATION.

Preston Hickey, in the *American Journal of Physiologic Therapeutics*, states that the use of a milliammeter in circuit with the tube will be of the greatest help in giving one information about the vacuum of the tube. If one adopts a fixed point on his rheostat, either with the transformer or with a coil (always using the same condition of interrupter), for the preliminary testing of the tube, and then carefully notes the milliammeter reading, he will have a very accurate gauge as to the penetration of the tube. Any inaccurate measure, such as looking at the bones of the hand with the fluoroscope, is passe and dangerous.

If the patient is allowed to lie upon the table and no precise methods of immobilization are employed, the plate will usually show blurred outlines of the part depicted. For the securing of proper immobilization the use of large, partly filled sand bags is of great value. In making plates of the head, some mechanical clamp which will rigidly fix the head during the exposure, will obviate the respiratory and cardiac movements and contribute greatly to the clearness and definition. It is impossible to make clean-cut head plates unless the movements of the head, due to the imparted respiratory and cardiac impulses are absolutely cut off. It is impossible to secure proper plates showing bone detail, of the neck and of the head of the femur unless the entire limb and body are immobilized by sand bags. One cannot obtain proper vertical plates of the knee or ankle unless the foot is rigidly held in a perpendicular position.

More discredit has been cast upon the Roentgen ray by inaccurate methods of localization of foreign bodies than by any other procedure. In this localization a preliminary plate should be made so as to find the general location of the extraneous material. When the general location has been determined, a mark should be placed upon the skin with a dermographic pencil. The tubular diaphragm should then be accurately centered over this mark upon the skin, and plates which have been made by this procedure should be employed for localization. The first plates of the preliminary localization should never be employed for the guidance of operative procedure.

Many errors arise from the fact that too few plates are made of the part under examination. Now that the exposures are so short that the danger of a dermatitis is practically entirely eliminated, it is better to make sufficient plates to thoroughly investigate the part desired. The worker in roentgenology should not base his charge, as is sometimes done, as to whether he makes one plate or two plates, but should charge a fee for the diagnosis, irrespective of the number of plates employed.

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# THERAPEUTIC BRIEFS.

**Nose Bleeding.—**

Roughton, in *The Practitioner,* states that when bleeding is due to perforated ulcer, our chief efforts should be directed toward the prevention of scab formation, for which purpose the following ointment is useful:

Ung. Hydrarg. Nit.....gr. xl.
Ol. Amygdalae.....oz. ss
Parolein .....oz. ss

**Cholelithiasis.—**

There is nothing better for the treatment of faulty conditions of the gall bladder than the formula recommended by Billings:

Sod. Salicyl.....gr. xv
Sod. Phos.....gr. xxx
Sod. Sulph. Sic.....dr. jss

One-half to one dram in a glass of hot water thirty minutes before meals.

**Tonsilitis.—**

Cold compresses, to be of any use, must be put under the chin and brought around the side of the neck on either side and be of sufficient width to cover the peritonsilar area. Dip in cold water, press out slightly, apply quickly, cover with oiled silk, and renew every twenty or thirty minutes.

**Arthritis.—**

C. Frank Lydston, in the *Journal of the A. M. A.,* prescribes the following lotion for local application in gonorrheal arthritis, coupled with internal vaccine treatment:

O. Gaultheriae.....dr. iij
Ext. Aconiti Rad.....
Ext. Belladon. Rad. aa.....gr. v
Mentholis .....gr. x
Adipis Lan. Hydrosi.....oz. j

Apply on sheet lint and surround by cotton and silk.

**Lead Colic.—**

Eli G. Jones, in the *Journal of Therapeutics and Dietetics,* states that the following prescription is about the most perfect antidote for lead poisoning that could be prepared:

Sulph. Magnesiae.....oz. xj
Nit. Potass.....oz. ss
Asidi Sulph.....dr. j
Boiling Water.....Oij

Give a tablespoonful every three hours until the bowels move; thereafter in smaller doses.

**Spastic Constipation.—**

After the patient has gone to bed, and assumed a horizontal posture, a soft rectal sound should be inserted and attach to an irrigator, and 2 to 4 decilitres of olive oil at a temperature of 40 deg. C. allowed to flow into the bowel, where it should be retained until morning. A copious evacuation will result.

**Acetonemia.—**

The injection of two drams of bicarbonate of sodium in four ounces of warm water into the bowel will often have a prompt and beneficial effect in acetonemia, even at a time when a fatal issue seems imminent. It is more efficient than giving it by mouth.

**Tuberculosis.—**

Pfannenstill obtains nascent iodine in the issues by giving sodium iodide by the mouth and ozone by inhalation; the former is carried by the blood and meets the latter in the lungs. Sodium iodide is given in doses of 0.5 to 4 grams per diem, not more than 2 grams being given at one time.

**Erythema.—**

A much used and very satisfactory lotion in this condition, when the skin is unbroken, is the following:

Ac. Hydrocyan. Dil.....dr. ij
Bismuth. Subnit.....dr. iij
Aq. Aurantii Flor. q. s.....Oss

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# SOME DOCTORS OF FICTION.

By George Thomas Palmer, M. D.

## IV. HENRY RIDER HAGGARD (1856).
### Dr. Therne.

IF IT IS contended that H. Rider Haggard is hardly entitled to a place with Fielding, Dickens, Sterne, LeSage and Balzac, and, hence, should not be included in that exclusive group who are to be permitted to introduce us to the doctors of fiction; I shall reply that we are searching for important doctors of fiction and have no concern for the eminence of their creators. If it be further contended that "James Therne," is not sufficiently well known to merit a seat in so distinguishd a group as we have assembled about us; I shall answer that, if you have not met Dr. Therne it is your distinct misfortune, and I shall further advise you that very many of the members of the medical profession who are most worth knowing, are heard of by the rank and file of people, little if at all.

In addition to the pleasure of meeting in Dr. Therne an enthusiastic young physician, we are permitted in this book to deal with important questions of ethics and to gain an insight into the operations of the great and wide-spread anti-vaccination movement. In fact, from cover to cover, this work is essentially medical and, be it said to the credit of Mr. Haggard, the ethical phases of the subject are handled far more sympathetically and far more intelligently than is usually the case when laymen attempt to deal with such things.

Briefly we may say that James Therne was an honor graduate of a London medical college, and that he served two years as an interne and one year in special study in a well-known hospital. Exhausted by hard work, he visited Mexico, where, by chance, he was held in quarantine through an epidemic of small-pox. There he had an opportunity to witness the frightful ravages of the disease among those who had persistently declined vaccination.

In the City of Mexico, Therne was married to a young woman who had gone through the trials of quarantine with him, and with his bride, the young physician returned to England and to Dunchester, where his father had practiced medicine. Here he found Sir John Bell, his father's former assistant, enjoying an enormous practice, and, in spite of Bell's discouragements, young Therne began practice in his old home town.

It was not long until the young doctor discovered that Bell was using his enormous influence in every way to injure his prospects, but after a long period of discouragement, an opportunity presented itself for Therne to demonstrate his superior diagnostic ability and, under such circumstances that Sir John was brought into a most embarrassing position. As a result of this incident, the secret dislike between the two physicians developed into open enmity; but during the period of bitter differences, Therne maintained his position with the highest regard for his professional ethics.

Some time later, when Therne's wife was about to be delivered of a child, Bell made friendly advances and voluntered his services at her accouchement. Welcoming peace with his brother practitioner at any price, Therne accepted the offer.

With his remarkable skill at weaving the highly improbable into very acceptable and credible form, Haggard outlines, with a shade of mystery, the following

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facts: Therne's wife develops puerperal fever, a fact of which the young doctor is not advised. After visiting the sick room, Therne goes to deliver the wife of Lord Colford, the most distinguished patient he had ever been called upon to serve. Both women die of puerperal infection, and criminal action is brought against Therne. Sir John Bell appears as a strong and incriminating witness against him. The judge practically instructs a verdict of not guilty, but the jury makes return in this form: "Not guilty, but we hope that, in the future, Dr. Therne will be more careful about conveying infection." It was, virtually, a verdict of guilty without a penalty.

During the trial, an eccentric individual, Stephen Strong, had furnished bail for the unfortunate physician and, when ruin stared him in the face and Therne had prepared to take his own life, Strong befriended him and turned him from that purpose, and caused him to bravely face his difficulties and attempt to rebuild his shattered practice. It was through Strong that Therne was called to see two children who had contracted erysipelas through unclean vaccination. One of these children died and the matter was given wide publicity by the rapidly-growing cult of anti-vaccinationists, and Therne was quoted as the authority in the case. This fact gave the impression to the public that Therne was an anti-vaccinationist and, to his surprise, the ruined physician suddenly found himself back in a lucrative practice and discovered that his benefactor was among the most rabid of the cultists.

Here we come upon one of the ethical phases of this interesting story which we may well pause to consider. Therne was a ruined man. Through no fault of his—in fact, through the bitterness of his associate in the regular profession—he was compelled to bear the disgrace of a public finding of criminal carelessness which resulted in the death of a prominent and much-beloved member of his community. He was a man of high ethical sense; but he was confronted with a demand for the necessities of life. In this condition—disgraced, crushed and poverty-stricken—there came to him a promise of material success in the attainment of which he would not have to say a word or do the simplest act. He had only to remain silent and permit the public to retain an impression which he had never intentionally given it. Further than this, before the unfortunate man had said a word in the cause of anti-vaccination, his brethren in the regular practice of medicine rose and with one voice announced that he was one so disgraced and discredited that his testimony in regard to vaccination or any other subject was without weight. This utter desertion by those from whom, under the tenets of our guild, he was entitled to support, was the thing which decided him, and he went on, under false colors which were thoroughly distasteful to him, to attain the only livelihood which seemed open to him.

That Therne fell from the high ethical plane which he had, through all his previous life, maintained, I grant without discussion, and he, poor devil, realized full well; but it is lamentable that, being discredited, and with the appearances strongly against him, it should have been the medical profession who practically forced him to his first real descending step. If you will learn the story of many of those men who have begun the practice of medicine uprightly and who have sunken to charlatanry and fraud, you will find that the intolerance and uncharitableness of their brother practitioners have done much to speed them on their downward course—and this testimony is not all mere excuse for wrongdoing.

Having once sacrificed his finer ethical feeling, it was not hard for Therne to fall to lower depths. Stephen Strong came to him with a proposition to go to parliament and offered him splendid remuneration and a brilliant future. To

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leave the scene of his humiliation and disgrace, was a great temptation; and to be able to do this under circumstances of prosperity and material advancement, seemed irresistable; but the price of these things was that Therne should become the advocate of the anti-vaccinationists and should persistently and actively agitate the subject. To a man of Therne's training and conscience, the price was almost too high. What passed through his mind is best told in his own words:

"I listened and shivered. The inquiry into rare cases of disease after vaccination had been interesting work, which, whatever deductions people might choose to draw, in fact committed me to nothing. But to become one of the ragged little regiment of medical dissenters, to swallow all of the unscientific follies of the anti-vaccination agitators, to make myself responsible for the promulgator of their distorted figures and wild statements—ah! that was another thing. Must I appear upon platforms and denounce the wonderful discovery as the 'law of useless infanticide'? Must I tell people 'that small-pox is really a curative process and not the deadly scourge and pestilence that doctors pretend it to be'? Must I maintain that 'vaccination never did, never does, and never will prevent a single case of small-pox'? Must I hold it up as a 'law (!) of devil-worship and human sacrifice to idols'?

"If I accepted Strong's offer it seemed that I must do all these things: more, I must be false to my instincts, false to my training and profession, false to my scientific knowledge. I could not do it. And yet—when did a man in my position ever get such a chance as that which was offered to me this day? * * * * Already in imagination I saw myself rich (for in this way or in that the money would come), a favorite of the people, a trusted minister of the Crown, and perhaps—who could tell?—ennobled, living a life of dignity and repute, and at last leaving my honours and my fame to those who came after me.

"On the other hand, if I refused this offer the chance would pass away from me, never to return again; it was probable even that I should lose Stephen Strong's friendship and support, for he was not a man who liked his generosity to be slighted, moreover he would believe me unsound upon his favorite dogmas. In short, for ever abandoning my brilliant hopes I condemned myself to an existence of struggle as a doctor with a practice among second-class people. * * * * If ever a man went through a 'psychological moment' in this hour I was that man. The struggle was short and sharp, but it ended as might have been expected in the case of one of my history and character. Could I have foreseen the dreadful issues which hung upon my decision, I believe that rather than speak it, for the second time in my life, I would have sought the solace to be found in the phials of my medicine chest. But I did not foresee them, I thought only of myself, of my own hopes, fears and ambitions, forgetting that no man can live to himself alone, and that his every deed must act and re-act upon others until humanity ceases to exist."

Finally, Therne yielded, and his candidacy for a seat in the House of Commons was announced. Under the shrewd guidance of Stephen Strong and with unlimited expenditure of money, the young doctor was elected on an anti-vaccination platform. His career in parliament was brilliant and, through the clever political work of Strong, he was re-elected with such satisfactory margins that there ceased to be any opposition to him.

That Dunchester, a royalist stronghold, should have been so regularly carried by the radicals on an anti-vaccination platform, caused much concern among the members of parliament, and it was felt that, for political reasons, the party in power must make some concessions to those opposed to vaccination. A com-

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pulsory vaccination bill was drafted, as the result of the investigations and deliberations of physicians and scientists which had extended over a period of several years, but as a political expedient, and indirectly on account of the election of Dr. Therne, there was inserted in the bill, before its passage, a fatal "conscience clause." This clause provided that any parent or other person who, under the bill would be liable for penalties for the non-vaccination of a child, should be entirely freed from such penalties if, within four months of its birth, he satisfied two justices of the peace that he conscientiously believed that the operation would be prejudicial to the child's health! Thus, through the influence of Dr. Therne, the vaccination law of England became virtually a farce and a dead letter.

Therne's prosperity continued. By the death of Stephen Strong, he acquired almost unlimited wealth, and finally he became Under Secretary of State. He was immensely popular in his home community, and, for years, the people were educated through his association, to refuse and discredit vaccination. Therne's daughter blossomed into beautiful womanhood, surrounded with every luxury.

Then small-pox came to Dunchester! Of the 50,000 people in the vicinity, 5,000 died, and among them, Therne's only child.

When the disease had begun to spread in the community, a young physician, to whom Jane Therne was to have been married, insisted upon vaccinating her; but in her loyalty to her father, she spurned the offer and the two young people were separated. A few days later, after the premonitory symptoms of the disease had shown themselves upon her, Jane came upon her father, in the dead of night, vaccinating himself.

Crushed by the impending death of his daughter, Therne, who had gone thus far in his life of deception, appeared at a great mass meeting arranged to check the growing sentiment in favor of vaccination. There he was confronted by young Doctor Merchison, his daughter's fiance, who disclosed his duplicity to the people.

Dr. Therne escaped to Madeira and there he writes this strange story of his life. What he has to say in his preface, I have reserved as the meditations of his last days. They tell the story of the doctor who lived a life for gain:

"The population of Dunchester is smaller by four or five thousand souls, and many of those who survive are not so good looking as they were, but the gap is easily filled and pock-marks are not hereditary. Also such a horror will never happen again, for now the law of compulsory vaccination is strong enough! Only the dead have cause to complain, those who were cut off from the world and despatched hot-foot whither we see not. Myself I am certain of nothing; I know too much about the brain and body to have much faith in the soul, and I pray God that I may be right. Ah! there it comes in. If a God, why not the rest, and who shall say there is no God? Somehow it seems to me that more than once in my life I have seen His finger.

"Yet I pray that I am right, for if I am wrong, what a welcome awaits me yonder when grief and chloral and that 'slight weakness of the heart' have done their work.

"Yes—five thousand of them or more in Dunchester alone, and, making every allowance, I suppose that in this one city there are very many of these—young people mostly—who owe their deaths to me, since it was my persuasion, my eloquent arguments, working upon the minds of their prejudiced and credulous elders, that surely, if indirectly, brought doom to them. 'A doctor is not infallible; he may make mistakes.' Quite so, and if a mistake of his should kill a few thousands,

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why that is the act of God (or of Fate) working through his blindness. But if it does not happen to have been a mistake, if, for instance, all those dead, should they still live in any place or shape, could say to me, 'James Therne, you are the murderer of our bodies, since, for your own ends, you taught that which you knew not to be the truth.'

"How then, I ask? So—let them say it if they will. Let all that great cloud of witnesses compass me about, lads and maidens, children and infants, whose bones cumber the churchyards yonder in Dunchester. I defy them, for it is done and cannot be undone; yet, in their company are two whose eyes I dread to meet: Jane, my daughter, whose life was sacrificed through me, and Ernest Merchison, her lover, who went to seek her in her tomb."

Yes, Dr. Therne is entitled to a place among our doctors of fiction, although he is not the creation of one of the greatest men of letters, although his tale is not yet sufficiently old to determine its lasting qualities. The story has lessons to teach which are applicable to far less serious things of professional life.

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## V. ALEXANDRE DUMAS (1802-1870.)

### Jean Paul Marat.

TO CLASSIFY Jean Paul Marat as a doctor of fiction, simply because he was a prominent character in those spirited novels of Alexandre Dumas, would be quite as incorrect as to describe Alexander Hamilton as a statesman of fiction on account of the part he played in Gertrude Atherton's splendid story, "The Conqueror." Yet, many of us, who have read more for our pleasure than for our profit, knew Marat first through fiction and later through the annals of French history. In our younger days, he was a vigorous character, intimately associated in our minds with Joseph Balsamo—that mysterious man of never-ending youth—whom Dumas has carried through his tales of the French Revolution. In fact, I am inclined to think that the fiction of Dumas gave more prominence to Marat than have all the pages of history—that Dumas, with all of the surrounding of imagery, was Marat's best and most faithful biographer.

Hence, while Marat was real and existed in the flesh, he is none the less a doctor of fiction. It was in fiction that I met him, in fiction that I knew him best, and, even after the perusal of the words of his biographers, I am utterly unable to dissociate him from his fictional friends and companions.

It is in the "Memoirs of a Physician"—the second of the "Marie Antoinette Series"—that we first come upon Marat, and we find him in a scene which well befits him. His biographer in real life, tells us that he was "a humane man, who could not keep his head cool in stirring times, who was rendered suspicious by constant persecution, and who has been regarded as the personification of murder." We find him in the Place Louis XV, in Paris, the air filled with smoke from burning ruins, while on the margin of the slopes and in the ditches, are heaps of corpses with disordered attire, stiffened limbs, livid and discolored faces and hands stretched out in the attitude of terror or of prayer. Marat is to be found at the extreme edge of this vast cemetery, in a field hospital, and here he is bandaging the wounds of those who are brought to him, and, as he attends his patients, "he speaks to them in words which rather express hatred for the cause than pity for the effect."

To the two robust assistants, who pass the sufferers in bloody review before him, he cries incessantly: "The women of the people, the men of the people, first!" And the gentleman or person of quality, however badly he may be injured, the young surgeon turns away without relief.

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A young man, with grief and anxiety written in every line of his face—young Philip de Taverney—comes before the surgeon, begging information as to his sister, Andree, whom he believes to have been killed.

"'Sir,' said the young surgeon, with a feverish vehemence which showed that the ideas he expressed had long boiled in his breast, 'Sir, Humanity is my guide. It is to her service I devote myself; and when I leave the nobles on their beds of death to assist the suffering people, I obey the true laws of Humanity, who is my goddess. All this day's misfortunes have been caused by you. They arose from your abuses, from your usurpations. Therefore, bear the consequences. No, sir; I have not seen your sister.'"

Socialist, anarchist, radical—all of these and whatever else you may wish to call him—he worked through the night as though impelled by some superhuman force. And it was a superhuman force—his fierce devotion to the cause of the poor and the afflicted. But as strong as his devotion was; as inspiring of pity as was the scene about him, it did not change his bitter hatred for the rich, and with scathing rebuke and with coldest cruelty, he turned all but the common people from him.

But during the night there came before him "a man already advanced in years, dressed in a grey cloth coat and milled stockings"—and this man helped tenderly to bear the body of a victim of the fray. But this old man was no more successful than the others in his supplications. He protested that he was a man of the people; but to no avail. Then he gave his name—Jean Jacques Rousseau!

The doctor gave a cry of astonishment, and making an imperative gesture, cried: "Give place to the man of nature! Make room for the emancipator of the human race! Place for the citizen of Geneva!"

It is thus that Dumas tells us of this doctor:

"His sleeves turned back to the elbow, his arms covered with blood, surrounded by lifeless and bleeding limbs, he seemed more like an executioner at work, and glorying in his task, than a physician accomplishing his sad and holy mission. Nevertheless, Rousseau's name seemed to have so much influence over him as to cause him to lay aside for an instant his usual brutality."

A few more words from this remarkable opening chapter of the great novel, will show us better those principles and sentiments to which Marat devoted his life. When the surgeon had rendered aid to Rousseau's adopted child, Gilbert, the great naturalist thanked him, adding, "All men are brothers."

"'Even the noble, even the aristocrats, even the rich?' asked the surgeon, his piercing eyes flashing from beneath his heavy eyelids.

"'Even the noble, the aristocrats, the rich, when they suffer,' said Rousseau.

"'Sir,' said the operator, 'excuse me. I am from Baudry, near Neufchatel; I am a Switzer like yourself, and therefore a democrat.'"

When Rousseau warned the surgeon that, while he should enlighten the people as to their rights, he should not urge them to vengeance, Marat replied with a fearful smile: "Oh, if the day of vengeance should happen during my life—If I could only have the happiness to witness it!"

Rousseau heard these words, and, alarmed at the tone in which they were uttered, as the traveler trembles at the first mutterings of the far-distant thunder, turned away. And that these first mutterings resulted in most frightful storms, we have learned from our French history—but from no source have we seen it all in such tragic reality as in the fiction of Dumas.

It is quite impossible, in this brief sketch, to follow Marat through the stirring hours of the French Revolution; the secret conferences in which he was

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such a power; in the riots; and in the writing of those wonderful pamphlets which so inflamed the minds of the people and filled them with hatred for the rich. At every important conflict between the aristocracy and the people, Dumas has had Marat appear; always the earnest champion of the people, daring everything, fearing nothing, inciting riot and strife and glorifying in bloodshed and disaster. We know that, in thus utilizing him as a character of fiction, Dumas has not greatly exaggerated the life of this remarkable man.

We may, however, stop for a moment in Marat's home and learn something more of his habits and personal life. Marat's door was the "center one of six" opening on a long corridor which formed the topmost story in the Rue des Cordeliers. Marat had made great preparations for the reception of Balsamo, who was to visit him. The small bed of walnut and the wooden chest of drawers shone brightly beneath the sturdy arm of the char woman, who was busily engaged in scrubbing the decayed furniture. Marat himself was assisting the char woman, had dusted the room and was replacing the flowers in the blue delft pot, which constituted the only ornament of the attic, at the moment that Balsamo entered. Marat was very poor and he prided himself upon his poverty, yet he showed too much embarrassment for a true stoic when thus found in his domestic duties by the great master.

And this was his home. A room in the garret, furnished with a narrow bed and a chest of drawers, with only a pot of flowers to brighten it; and here, in these modest surroundings, Marat wrote those lines which contributed so much to the discord and the turbulency of the most turbulent period of French history.

But the physician and the interested layman will gladly accompany Marat and Balsamo as they emerge from these simple quarters, and make their way to the ampitheater in the hospital, whither Marat desired to go early to claim the body of one dead of acute meningitis, before his colleagues could obtain the corpse for their own investigations.

Their way took them through the narrow alley leading to the Rue Haute Fuille, and they finally reached a long, narrow room, where two corpses, a male and a female, lay stretched upon a marble table. The woman had died young; the man was old and bald. "They were lying side by side on this cold bed, they who had perhaps never met before in the world, and whose souls, then voyaging to eternity, must, had they looked down on earth, have been struck with wonderment at the proximity of their mortal remains."

"Marat, with a single movement, raised and threw aside the coarse linen which covered the two bodies, whom death had thus made equal before the anatomist's scalpel.

"'Is not the sight of the dead repugnant to your feelings?' asked Marat, in his usual boasting manner. 'I, who see this sight daily, feel neither sadness nor disgust. We practitioners live with the dead, and do not interrupt any of the functions of our existence on their account. Besides, why should I be sad or feel disgust? In the first place, reflection forbids it; in the second, custom. Why should I be afraid? Why should I fear an inert mass—a statue of flesh instead of stone, marble or granite?'

"'In short, you think there is nothing in a corpse?' asked Balsamo.

"'Nothing—absolutely nothing.'

"'But in the living body?' queried the master.

"'There is motion,' said Marat proudly.

"'And the soul?—you do not speak of it, sir.'

"'I have never found it in the bodies which I have dissected.'

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"'Because you have only dissected corpses.'

"'O, no, sir: I have frequently operated upon human bodies.'

"'And you have found nothing in them more than in the corpses?'

"'Yes, I have found pain. Do you call pain the soul?'

Here we see Marat in his element. We wait for a moment to see an exhibition of his remarkable skill in severing the head of the young woman from her body. We see his pride and his cleverness. We see him pick the head from the floor and, as he holds it in his wet hands, we hear him describe to Balsamo an instrument which he hopes to see devised—"with two arms of oak wielding a cutlass"—to be employed in decapitating the rich and the aristocratic—that horrible instrument which France should one day see all too frequently used—the guillotine.

We have also seen into his heart. We have seen his absolute materialism—his doubt as to the existence of the soul—and we wonder no longer at his coldness, his lack of sympathy, his capacity for the most perfect hatred.

As Dumas shows him to us, throughout the Revolution, Marat was a most fascinating and terrible character, and yet Dumas has probably not overdrawn him. A well-known historian has written of Marat: "The life of Marat now becomes part of the history of the French Revolution. From the beginning to the end he stood alone. He was never attached to any party; the tone of his mind was to suspect whoever was in power; and therefore no historian has tried to defend him, and all state the facts about him with strong coloring. About his paper, the incarnation of himself, the first thing to be said is that the man always meant what he said; no poverty, no misery or persecution, could keep him quiet: he was perpetually crying *'nous sommes trahis.'*"

Aside from being a wonderful doctor of fiction, Marat was a remarkable doctor of real life—one who should not be forgotten when we make up that great volume reciting what medical men have done for civilization. He was finally murdered by a young girl—Charlotte Corday—and "grand was the funeral given to the man who had suffered so much for the republic." * * * * "Whatever his political ideas, two things shine clearly out of the mass of the prejudice which shrouded the name of Marat—that he was a man of great attainments and acknowledged position, who sacrificed fortune, health, life itself, to his convictions and that he was no *bete feroce,* no factious demagogue, but a man."


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The efficacy of these Wafers is due to their finely balanced ingredients which exert a soothing and healing influence upon the mucous membrane and restore to normal and healthy conditions.

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**THOSE COUGHS THAT HANG ON.**

Few conditions prove such a source of worry and annoyance to patient and physician during the cold months as those obstinate coughs of bronchial origin. Not only is the cough a great bother but, if not checked it is not unusual for a graver state—such as a pulmonary tuberculosis—to follow. For the relief of "those coughs that hang on" Cord. Ext. Ol. Morrhuae Comp. (Hagee) is a favorite remedy with thousands of practitioners. It takes the edge off the cough, soothes the irritated mucous membrane and so builds up general health as to increase markedly the bodily resistance to other and more serious diseases. Cord. Ext. Ol. Morrhuae Comp. (Hagee) is a potent yet palatable cod liver oil preparation.


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# BOOK REVIEWS.

BIOLOGY. General and Medical. By Joseph McFarland, M. D., Professor of Pathology and Bacteriology, Medico-Chirurgical College of Philadelphia; Fellow of the College of Physicians of Philadelphia. With 160 illustrations. Philadelphia and London: W. B. Saunders Company. 1910.

In both of his other books Dr. McFarland has made good. His work on the Pathogenic Bacteria has passed into its sixth edition, while his excellent book on Pathology, albeit only in its second edition, has already assumed the status of a standard text. The present work would seem to be a broader and more basic effort than his previous books—an attempt to establish an intelligent and working relationship between all the various forms and reactions of living substances in one general scheme, subject to the same laws and playing each its part in the vast problem of life and progress. In these days of modern medicine, when such subjects as infection, body-defense, immunity, hematology, and the like, hold the center of the stage, it is imperative that the medical man should have some intelligent and comprehensive understanding of the truths and principles of biology; and most of the present-day medical schools now require a course in biology, with especial reference to its bearings on medical problems. We are not sure that Dr. McFarland's book will be found exactly suitable for this medical school curriculum in the subject; but it affords a concise and well-selected presentation of general and medical biology for those practitioners and students of medicine who desire a little more than the bare fulfillment of a set curriculum—who wish to get an adequate, though not too exhaustive, grasp of the subject to enable them to intelligently meet and deal with the biological problems of pathology and therapy which are arising every day in medical theory and practice. A great many physicians, we are quite well aware, will not care for such a book. But those who want it, want it badly, and will find it satisfying.

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HYDROTHERAPY. A Work on Hydrotherapy in General, Its Application to Special Affections, the Technic or Processes Employed, and the Use of Waters Internally. By Guy Hinsdale, A. M., M. D., Lecturer on Climatology in the Medico-Chirurgical College of Philadelphia; Corresponding Fellow of the Royal Society of Medicine of Great Britain, etc. Illustrated. Philadelphia and London: W. B. Saunders Company. 1910.

This much heralded work has appeared at last; and certainly if there is one man in the country who should be in a position to give us an authoritative and enlightening work on hydrotherapy, that man is Dr. Guy Hinsdale. The book has two distinctive and conspicuous merits which entitle it at once to a more respectful consideration than many of the previous works on the subject. First, it is concise, to the point, straightforward. It does not darken counsel with words, nor weary and confuse with vain repetitions. And, second, it is moderate and conservative in tone. It does not offer the water cure as a panacea for all the ills that flesh is heir to, nor even advocate its indiscriminate employment in conjunction with other treatment. On the contrary, the key-note of the book is struck in the introduction, where the author admonishes that "hydrotherapeutic measures require a nice estimate of their value in order that their aid should not be lost." We are especially pleased with the section devoted to the technique of the various procedures. Here is all that a practitioner needs to carry out the treatment in his own practice, set forth with brevity, precision, and clearness.

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The diseases in which hydrotherapy is of value are arranged in alphabetical order in their proper section, making reference quick and easy, and the most efficacious form of procedure described and its rationale explained. It is altogether a most excellent practical working manual, and should have a wide circulation among the profession. We are glad to note the author's tribute to Dr. Simon Baruch's labors and influence in this branch of therapy, which is both graceful and well-deserved.

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A MANUAL OF DISEASES OF THE NOSE, THROAT AND EAR. By E. B. Gleason, M. D., LL. D., Clinical Professor of Otology in the Medico-Chirurgical College, Philadelphia; Aurist to the Medico-Chirurgical Hospital; Surgeon-in-Charge of the Nose, Throat and Ear Department of the Northern Dispensary. Illustrated. Second Edition, Thoroughly Revised. Philadelphia and London: W. B. Saunders Company. 1910.

It has always seemed to us that Dr. Gleason's little manual was an ideal vade mecum for the general practitioner in his dealings with the regional troubles to which it pertains. It is—or so it appears to us—one of the few specialists' books written with the genuine view of helping the general practitioner to do his own special work; and the reviewer is able to offer his own personal testimony to the fact that it "fills the bill." All the commoner affections of the ear, nose and throat are considered, and the technique of their treatment described in plain, simple language which the physician can easily understand and carry out. The pathology and therapy of the naso-pharynx has undergone considerable modification since the first edition of the book appeared, and all of this part of the subject is brought thoroughly up to date in the new edition. The latter section of the book is devoted to some of the more serious operative procedures connected with internal ear, mastoid, and intracranial conditions. And, finally, an appendix contains some very useful formulae for various external and internal applications.

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TREATISE ON DISEASES OF THE SKIN For the Use of Advanced Students and Practitioners. By Henry W. Stelwagon, M. D., Ph. D., Professor of Dermatology in the Jefferson Medical College, Philadelphia; Dermatologist to the Howard and Philadelphia Hospitals; Consulting Dermatologist to the Pennsylvania Institution for the Deaf and Dumb, to the Pennsylvania Institution for the Feeble Minded, and to the Widener Training School for Crippled Children; etc. Sixth Edition. Thoroughly Revised. With 289 Illustrations in the Text, and 34 Full-Page Colored and Half-Tone Plates. Philadelphia and London: W. B. Saunders Company. 1910.

By the time a book of this character has reached its sixth edition, what is left for the reviewer to say about it? It has justified itself by a far truer and more practical gauge than any literary opinion, namely, by the criterion of actual usefulness and universal adoption. Most of the new matter contained in this new edition of Stelwagon's book pertains either to the additional field of dermatology opened up by the exploitation of our tropical possessions, the growing prevalence and importance of pellagra in this country, and the introduction of one or two new modes of treatment, conspicuous among which is the use of carbon dioxide snow. In its physical features, this is one of the finest books that W. B. Saunders Company puts out; and of course no little credit for this must be given to the author. Dermatology is one of the branches of medical science and practice that can be adequately taught by nothing short of visualizing the conditions treated of; and that this may be done with anything like efficiency, the photographer and lithographer's art must be invoked to the fullest and highest degree. The illustrations and plates contained in the book under review are beyond criticism, and share with the text in making the work a splendid exposition of dermatology. It is, perhaps, a little exhaustive for the purposes of the gen-

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eral practitioner. However, skin diseases constitute a phase of medicine in which the physician is obliged to be more or less of a specialist himself, and it is therefore desirable that his text-book on the subject should cover the ground pretty thoroughly. We have nothing but commendation for Dr. Stelwagon's book.

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THE PRACTICE OF SURGERY. By James Gregory Mumford, M. D., Visiting Surgeon to the Massachusetts General Hospital; Instructor in Surgery in Harvard Medical School; etc. With 682 Illustrations. Philadelphia and London: W. B. Saunders Company. 1910.

After contemplating the numerous large and exhaustive works on surgery that have emanated from the medical press during the past ten or twelve years —many of them extending into six and eight volumes, and all of them dealing with surgery from the standpoint of a highly specialized specialty—it is exceedingly refreshing to find an author with a sufficient insight into the need of the times, and sufficient courage of his convictions, to prepare and launch a work on the subject from the viewpoint of the general practitioner. The motive and scope of the book is expressed in the author's modest hope, to which he gives utterance in the preface, that "the student will find here a comprehensive description of all such general surgical ailments as may fall to him for treatment and advice." This purpose and range are admirably adhered to in the plan of the book. We are, of course, far from suggesting that a man should not have all the light and knowledge that is obtainable on every subject that he expects to profess and to practice; but it is certain that all the surgical knowledge that the general practitioner is likely to need can be compressed into a much smaller space, and told in much more concise fashion than is compassed by such voluminous works as we spoke of at the outset of this review. And we are sure that the general physician throughout the country will welcome a modern, authoritative book, like that of Dr. Mumford's, adapted to the needs and exigencies of general, every-day practice. We can hardly conceive of the general practitioner, even one who does virtually all of his own surgery, encountering anything in the surgical line which is not adequately dealt with in this comparatively small volume.

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THE TREATMENT OF DISEASE. A Manual of Practical Medicine. By Reynold Webb Wilcox, M. A., M. D., LL. D., Sometime Professor of Medicine, New York Post-Graduate Medical School; Consulting Physician to St. Mark's and to the Nassau Hospital, etc. Third Edition, Thoroughly Revised and Enlarged. Philadelphia: P. Blakiston's Sons and Company. 1911.

The marvelous expansion of the science of medicine in the last two or three decades, and the consequent necessity of dividing it into sections and departments for separate research and exposition, have made the old-style text-book of practice more or less of an anomaly. Yet it can not be denied that there is still a need—nay, perhaps all the more need—for a text-book which shall serve the purpose of a sort of clearing house for these segmented contributions to medical knowledge, and epitomize them in resultant, usable form. This, we take it, is what the author has wisely undertaken to do in the present edition of the book under consideration. He himself declares his aim to be the brief presentation of the latest views upon questions of diagnosis and treatment of disease; and, looking casually through the work (which is of course the most we can do) we are struck most forcibly and pleasantly with the rare discrimination and selective faculty he has displayed in carrying this intention into effect. There is a conspicuous absence of all the obsolete, stereotyped, rehashed drivel that cumbers the pages of so many text-books of general medicine, and an equally noticeable presence of live, current teaching.

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# NOTES AND MISCELLANY.

### POST-GRIPPAL ASTHENIA.

OF ALL the acute infections to which human flesh is heir, none seems to be followed by such general prostration as La Grippe. As the Irishman aptly described it, it is "the disaise that keeps ye sick for a month after ye get well." The general devitalization that ensues after the subsidence of the acute symptoms appears to be entirely out of proportion to the severity of the original attack. It is therefore distinctly the part of clinical wisdom to inaugurate a vigorous reconstructive campaign as soon as the febrile movement subsides. Plenty of fresh air, an abundance of nutritious but easily digestible food, and regular doses of Pepto-Mangan (Gude) constitute a trio of therapeutic measures of marked benefit. If the heart action is unduly weak, or if the prostration is more than usually pronounced, an appropriate dose of strychnia added to the Pepto-Mangan is of considerable additional service.

### SUPPORT THE HEART.

In PNEUMONIA and TYPHOID FEVER the whole question of treatment is one of expectancy. There are no specifics and therefore the physician has to exercise his skill in keeping the heart of his patient going until the disease runs its natural course and ends by crisis or lysis as the case may be.

"From the incipiency of this disease, to and through the convalescence, the condition of the heart is a haunting concern." (Dr. Frank S. Meara, *N. Y. Medical Jour.*, Jan. 8, 1910).

"All treatment is of no avail if the heart is not watched closely; here lies our success or failure." (Dr. W. H. Kahrs, *American Medicine*, June, 1910).

In DIGALEN the physician has a valuable aid in the natural cure of these two ailments, for by its deep intramuscular injection, or its administration by mouth or rectum, the enfeebled heart can be toned up and cardiac syncope avoided. Furthermore, the marked hyperleucocytosis which is said by Mirano ('Riforma Medica', No. 23, 1907) to be produced within 7 or 8 hours after the injection of Digalen, and which becomes nearly doubled in the next 24 hours, is an important factor that ought not to be forgotten in the treatment of pneumonia, typhoid fever and the infectious diseases.

Dr. M. Hartwig, Buffalo, N. Y., Consulting Surgeon Erie and other Hospitals, makes this statement,—"Digalen has given me, in a few positively desperate cases, such unmitigated satisfaction that I am perfectly willing for the profession to know of my indorsement. I am convinced that in any case of defective heart compensation where Digalen fails, no remedy known today will accomplish anything."

Digalen is a sterile solution of Cloetta's soluble digitoxin and is marketed by The Hoffmann-La Roche Chemical Works, New York. Samples are furnished to physicians upon request.

### THE PASSING OF COD-LIVER OIL.

For many years, in cases where the need of fats was apparent, it has been customary to prescribe cod-liver oil. This oil is fairly digestible, but is very prone to upset the stomach, and many patients will not take it on account of its vile taste; it is practically impossible to disguise this vileness—the chemist has tried loading it with all sorts of aromatics and flavors with little success. The fishy taste persists in spite of everything.

In tuberculosis and other chronic ail-

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ments the low vitality reflects seriously upon the stomach; for this reason cod-liver oil in many cases simply complicates matters by interfering with the digestion of other foods. Another objection to it is its tendency to become rancid (in common with all animal fats), with the formation of certain fatty acids of a toxic character. The rancidity is sometimes concealed in highly aromatized emulsions, but, just the same, they are unfit for use and productive of harm.

Corn oil is a good substitute; as emulsified by The Abbott Alkaloidal Co. of Chicago, it is pleasing to the taste and keeps well. They sell it under the name of Emulsion Maizole. It is now prescribed throughout the country in place of cod-liver oil and other nausea-provoking fats. It is accepted without protest by the most fastidious patient. It has high food value and in all maladies in which there is waste of tissue and vitality—where extra nourishment in quickly available form is required Emulsion Maizole is. We urge all our readers to investigate this new corn oil preparation.

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### WINTER WEATHER SUGGESTIONS.

The great prevalence of coughs, at present, especially those of grippal origin, makes it not amiss to present a suggestion and a remedy. In place of remedies which always dry up expectoration, disturb digestion, cause constipation, and render the patient uncomfortable and drowsy, it is desirable to employ the extremely efficient and popular cough sedative, Antikamnia & Codeine Tablets. This remedy relieves cough by its soothing effect upon the air-passages, but does not interfere with expectoration, and, in fact, renders it easier by stimulating the respiratory muscles. Only a very small dose, one tablet, every one, two or three hours, for adults, is required to produce a satisfactory result. One on the tongue when retiring will greatly relieve night-coughs.

### AN OFFER WORTH WHILE.

The Camphorozone Co., of Chicago, proprietors of "Camphorozone," that took the field by storm, and became a favorite with the profession last year, has at last been compelled to send their product out in bulk, in order to supply the demand and facilitate the prescription work of the dispensing physician.

This ideal antiseptic has earned a place in the dispensary of the specialist, as well as that of the general practitioner; the latter has found it inconvenient to dispense from ordinary sized bottles, and to remove this obstacle to its freer use, it is now also put up in gallons at $5.00; five pints at $3.50; and quarts at $1.50. The innovation has prompted the Company to further consideration of plans that will secure a more extensive use and greater favor for "Camphorozone," the most interesting of which, to the physician, is an offer that includes, with your initial order for a gallon of "Camphorozone" at $5.00, one gallon of "Camphorozone Syrup of Hypophosphites Comp.," a most perfect, well balanced and stable product, and five hundred "Laxettes"—a 1½-gr. Phenolpthaleine product, constituting one of the most pleasant, most efficient, and most palatable laxatives ever offered to the profession.

Considering that all three of these meritorious articles contribute to every day practice, the offer certainly affords both opportunity and profits.

The plan of the Camphorozone Co. deserves your co-operation. "Camphorozone" has made good, and it deserves your specification and use wherever an ideal antiseptic is indicated or desired.

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chemical analyses made by prominent chemists that these preparations do not bear the faintest resemblance to Peacock's Bromides in composition, either as regards the purity of their ingredients or the presence of all the mixed salts."

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## TUBERCULOSIS OF THE PLACENTA.

Schlimpert, in *Archives of Gynakologic,* reports the results of examination of the placenta for tuberculosis in Schmorl's clinic in Dresden. In 7 cases of tuberculous mothers the placenta was positively found tuberculous in 5 through histological examination and the detection of tubercle bacilli. In 1 case tubercle bacilli were obtained by the stroke method. Thus, in 85.7 per cent of tuberculous mothers the placenta was found tuberculous; in 5 of the cases the placental tuberculosis was intervillous, and in 3 the decidua was infiltrated with bacilli and round cells; in 2 cases where tubercle bacilli were recognized by stroke preparations, the form of tuberculosis was probably intervillous. These placentæ were obtained from mothers who had severe general and advanced tuberculous infection. There is reason to believe that the tubercle bacilli pass in the early months of pregnancy from the tuberculous mother to the placenta. In all, the results were positive in 10 cases, of whom 2 were studied by the stroke method. Schlimpert believes that tuberculosis of the placenta is a reaction of the maternal organism against tuberculous infection. There is no reason to believe from his researches that tubercle bacilli find their way from mother to fetus. Autopsy made upon children dying of tuberculous mothers fails to find macroscopic evidence of the disease. It is possible that such children die from a toxin which is not readily detected. Recent observations point to the possibility of fetal infection, and further investigation must be undertaken before the question is definitely settled.

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# The Medical Brief

A MONTHLY JOURNAL OF PRACTICAL MEDICINE.

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## EDITORIALS.

### THE EDITORIAL AND THE READER.

WHENEVER in the performance of our purely editorial function, we venture outside of the stereotyped repertory of what are known as "safe" subjects, and essay to speak our editorial mind upon some topic that involves debatable territory, there is always a certain number of readers whose views do no happen to coincide with those of the editorial in question, who promptly and curtly write to us to "kindly discontinue my subscription." Doubtless other editors—certainly all other editors who decline to "stay put"—have the same experience.

Now, no editor really enjoys having subscriptions discontinued for any cause. There are various and obvious reasons why it is disagreeable to him, the most practical and mundane of which is that he needs subscribers, as many of them as he can get and keep, to maintain the profitable features of his journal. But an editor is not, after all, compounded entirely of mundane elements, and there are other aspects of the "discontinue my subscription" experience which hurt him fully as keenly as the mere cutting off of that much revenue. And of all the reasons for the withdrawal of a reader's interest and support, none is so disheartening to the editor, or—pardon us—so unreasonable on the reader's part, as a simple disagreement with the views embodied in some occasional editorial.

No reader of a journal—medical or other—who stops to reflect a moment, would care a rap for a publication whose editor was a stick, with no individuality or backbone, no opinions but those he is paid to have and no courage to venture out of the beaten track once in a while. "Safe" subjects are apt to prove a trifling monotonous and wooden if they are never transcended. It is the debatable topics that lend spice and interest to journalism. And in the editorial discussion of these debatable subjects it can hardly be avoided that the editor will sometimes cross opinions and sentiments with some of his readers. What then? Does a man "discontinue his subscription" to his daily paper because, forsooth, the editorial utterances of the paper occasionally fall foul of his own personal views and feelings? Or does he not rather, if he takes any action at all, pen a disputatious "Now, sir," to the recalcitrant editor, and does not the paper, if it be worth a continental, print his remonstrances, and is not everybody thereby edified and the truth vindicated?

The editorial department is, after all, more or less of a personal factor in a journal. It represents largely the editor's personal views and opinions; and so long as it is not positively vicious, or does not constantly violate the reader's conscience, the latter does not need to regard himself as personally affronted by a difference of attitude between the editor and himself. He need not even regard the editor's utterances as intended to be imposed upon him in the way of an authoritative treat-

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ment of the subject. We know that it is officially a journalistic heresy to admit that an editor may be fallible; but we are not now talking in a severely official manner, we are indulging in a little heart to heart informal talk with our readers, and in that relation we do not mind confessing that the editor of this journal is an exceedingly human and fallible individual, often wrong, and always willing to be convinced that he is wrong. This journal does not seek to impose its editorial opinions on its readers, nor does it expect its readers always to approve its utterances or to regard themselves as "counted in" upon them. Its editorial policies are, however, clean and sincere, unfettered to any special interests and untainted by any personal animosities; and being so, we go upon the assumption that our readers desire vertebrate, red-blood editorials, even though they occasionally conflict with their own sentiments.

For the rest, we endeavor, in the same earnest, unshackled spirit, to furnish our readers good scientific and literary pabulum, which is after all the chief part of the journal, and we submit to our sensible clientele of readers whether it be not a trifle unreasonable to curtly "cut off" a good, conscientious journal because its fallible editors once in a while say something that does not quite jibe with everyone's views. If the journal is not intrinsically worth the subscription, by all means stop subscribing for it. If its editors make statements or take positions with which you disagree, "go for them" in their own pages, and see how quickly they will publish such rejoinders. But to peremptorily sever all relations with a worthy enterprise because one of its representatives makes a little speech that you cannot quite swallow,—that, dear reader, is a trifle inconsistent with both intelligence and fair play. Now isn't it?

And finally, let us add that this little tete-a-tete is not solely in our own interest, but in behalf of all misunderstood editors who suffer the same way. We do not recall that anyone has ever preached such a sermon before. Editorial dignity is not supposed to permit it. We do not pretend to much dignity, therefore it was not so great an effort to lay it aside. We will now resume what little we habitually wear, and "return to our muttons."

## THE RISE OF MEDICAL GYNECOLOGY.

IT IS gratifying to note a decided and steady return to sanity on the part of our friends the gynecologists. For many years there seemed to be no place at all in this branch of medical science for therapeutic principles and practice. Its alpha and omega was expressed in the one word, Surgery. No remedy was offered for the simplest ailment of the most useful pelvic organ except the very obvious recommendation to lop it off, and no better subject appeared for discussion among gynecologists than the most workmanlike method of lopping. Nor was that the worst feature of the matter. Not only was Ephraim joined to his surgical idols, but he actually gloried in his idolatry, so that the high places of gynecology, in this country at all events, became temples of skilled mechanism, where men worshipped, awestruck, at the marvels of manual dexterity.

Now we have no thought of belittling the value of surgery, or questioning the desirability, so long as the surgical expedient has to be employed, of impressing into its performance all the mechanical and executive skill that is available. Nor need we deny that, in individual cases, surgery of the most radical type is often a necessity; even Nature performs amputations when other means fail. Nevertheless, the central truth remains that surgery—at least amputative surgery, whatever may be true of plastic surgery—is not an ideal or scientific measure, but a *dernier ressort*. furthest removed from proximate principles of all the courses open to us; and in its

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essential performance it bears no relation to the progress of medical science, i. e., in the understanding of, and proximate assault upon, disease. He who designs a superior surgical technique, or demonstrates how a hitherto unmanageable lesion may be successfully extirpated, renders a signal service to individual suffering; that may be freely admitted. But he who succeeds, in ever so humble a way, in turning back, to ever so slight a degree, the surgical indicator, achieves a far more real and permanent contribution to medical science, and renders a fundamental service to the race.

Hence, we repeat, we are unfeignedly glad to know that, amid the widespread and fatuous worship of the false gods of surgery in the ranks of gynecology—false, be it understood, only in respect of their exaggerated significance—there remained a thousand knees that had not bowed to Baal and all the lips that had not kissed him, and that the counsels of these saner men are now beginning to prevail. We are coming to recognize that there are other and better ways to the female pelvis than through the vagina and the abdominal wall, and other and better means of controlling the genital functions than by suppressing them. We are beginning to realize the significant truth that nature designed the vaginal opening for an outlet, and not for an inlet.

The hour has struck—and we are glad to hear it sound—for all the dazzling butchery to cease, and physiological gynecology is coming into its own. The tide has turned, and whereas there were formerly no internists in gynecology except among the smaller and less daring men, now it is the latter who resort in every instance to the knife, while the gynecological leaders are giving more and more attention to therapeutic and plastic measures. We have no more desire than anyone else to witness a return to the old state of affairs, when the youthful graduate armed himself with a speculum and a glycerine-and-iodine tampon and set out to practice gynecology. But there is a wide pathologic and therapeutic range between the glycerine-and-iodine tampon and a pan-hysterectomy—and this middle ground represents the genuine science of gynecology, the rational control and therapeusis of the female genital organism.

We rejoice to see that the exploration and development of this hitherto untrodden territory in gynecology is at last being seriously undertaken by those who are most competent to work it out—that our great gynecologists are shaking off the spell which has so long held them enslaved to the dazzlements of brilliant surgery, and are going about to establish, deep upon the foundations of physiology and proximate principles, a system of gynecology whose development and administration will reduce the element of surgery to a minimum, if indeed it does not cancel it from the equation altogether.

## DYNAMIC THERAPEUTICS.

THE feature of modern therapeutics which distinguishes it, more than anything else, from the old therapeutics, is that we no longer concern ourselves about the action of the drug or other agent upon the patient, but about the reaction of the patient to the drug. It is no longer a question of what the medicine will do to the patient, but what the patient will do to the medicine. We have come to realize that the body is a complicated and delicate piece of machinery—and going machinery at that—and we no longer hurl into it a lot of powerful agencies in a rude attempt to drive it, perforce, into proper running order, but we carefully calculate each minute part of its complex functionation with nicety and precision, and, applying

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the exact kind and degree of modifying influence at the best available point, we bring about a wholesome reaction on the part of the whole mechanism which remedies the trouble.

This is what we have ventured to call "dynamic therapeutics." It is a much more scientific and rational system than the old scheme of forcing what was loosely termed the "physiological" action of drugs, i. e., the crude primary result obtained by the chemical or physical action of the drug upon the tissue or organ to which it was applied, without any reaction on the part of the function. By the same token, it is a much more difficult system of therapeutics to practice, for it puts out of court all the clumsy, arbitrary labelling of diseases and their treatment as classified entities, and demands a thorough canvass of all the factors, etiological, pathological, and symptomalogical, which enter into each individual case, and the proper application of the therapeutic agent to call forth the necessary reaction in the patient.

And further, it opens out to the practitioner a much wider and more varied field of therapeusis than was possible under the old regime. For, if the therapeutics be understood to mean the awakening and the proper direction of a reaction in the patient, then any agent which, from its character and the nature of the case, may be reasonably calculated to bring about such a properly-directed reaction, belongs to the realm of rational therapeutics. It need not be a drug—although a drug is frequently indicated. It may be some form of electrical or physical stimulation; it may be some properly directed exercise on the part of the patient himself; it may even be some form of suggestion by the physician. Nor is it necessarily the same agent that is called for in every individual suffering from the same trouble. Different people react differently to the same agent. Scold some persons and they wilt, while others are spurred by sharp rebuke into healthy effort. So it is with the body. The crucial test is not the agent, but the patient's reaction to the agent.

One of the most notable features of this new therapeutics is the remarkable widening that has taken place in the number and variety of remedial agencies. Drugs themselves have taken on a new and more scientific aspect, and lend themselves to a far more accurate and rational application. And to drug therapeutics have been added a large group of curative agents which, properly understood and applied, call forth a health-restoring reaction in the mind and body of the patient such as drugs cannot accomplish. No physician who desires to be abreast of the modern rational medicine, and to do the best for his patients that twentieth century medical science makes possible, can afford to neglect these newer methods of therapeutics. It is the men who have come to distrust the old system of forced drug action, and who have not acquainted themselves with the new system of dynamic therapeutics and its available agencies—it is this class of men who constitute the "therapeutic nihilists" of the present day. It is against this paralyzing spirit of therapeutic nihilism that the influence of this journal is earnestly directed; and we combat its insidious negativism by a fair and rational presentation of all the armamentaria which latter-day skill and knowledge have placed, and are placing, at the disposal of the progressive, ambitious physician.

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# Rhinoplasty in Nose Destroyed by Cancer.

By B. L. Eastman, M. D., Kansas City, Mo.

Surgeon and Gynecologist to the Missouri Hospital for Women, former Professor of Gynecology in the University Medical College, Kansas City.

THE report of this case is prompted by the desire to contribute modestly to the current literature on Rhinoplasty, which is almost a minus quantity in English.

The barrenness of our literature as compared with that of the French, Italian, and German, is surprising when one starts to investigate it even in a small way, as the writer did prior to the beginning of this paper.

The chapter on Rhinoplasty in Binnie's Surgery is probably the best and clearest resume of the subject in any of our modern works. To this most excellent book this article owes the modicum of historic and scientific data that it may contain.

Rhinoplasty, the operative correction of deformities of the nose, is a branch of constructive surgery that has developed most in France and Italy, surgeons there reporting series of cases far in excess of any in England or America. The reason of its wider application there may lie in more virulent and neglected syphilis in the lower classes, and the, until recently, fashionable Code Duello among the gentility.

Nasal defects are roughly grouped in two large classes; the partial or sub-total, and total, loss of the nose. The latter is rare even in Europe, and is scarcely ever seen in this country. Sub-total defects include all the minor losses of substances, such as destruction of one ala, loss of the fleshy tip, loss of the whole end, defects in the skin and cartilage or septum or all, and saddle-back deformity with flattening of part or all the organ.

The causes of these partial defects are variable and may be anything from mules to mayhem, but in this country, cancer, accidental injury, freezing, and late syphilis, are the chief factors in about the order named.

Whatever the cause and however slight the defect, it is noticeable on the individual and a nuisance to him out of all proportion to its anatomic importance. With an extensive defect, the otherwise welcome person becomes repugnant almost beyond toleration.

The technic of nose repair broadly follows one of two methods; first, pedunculated living flaps swung down from the forehead, or, second, living flaps attached to the hand, forearm, or elbow. The one is known as the Indian, the other as the Italian method.

The French school a generation ago tried to impress its individuality on the method of sliding flaps from the face and cheeks and would have it that this should be called the French method. The name, however, is not generally adopted.

As between the Italian and the Indian methods the choice is always with the latter; pedunculated flaps from the forehead are easier to plan, easier to handle and simpler in their mechanics. The Italian method shapes the flap from the living finger or arm, later attaching it to the defect in the face until it becomes vitalized in its new location. Such a method is complex to say the least; it requires two or more operations to get the flap in place, and a complicated apparatus to hold the donating limb solidly. Patients who have the fortitude and toleration to stand such treatment will be hard to find in our restless and impatient Occidental civilization.

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Without going into the academics of the subject, and with little facility for reviewing the literature, it may answer the purpose to describe this case along with its illustrations, as taken from our records in the Missouri Hospital for Women.

*Case No. 164, 1909.*—Mrs. C., referred by Doctor Huff of Mound Valley, Kansas.

The patient had a small sore on the right side of the nose two years before. It grew slowly and under improper treatment finally destroyed the nose in its greater part. She at last went to Dr. Huff, who stopped the cancerous progress and healed the sore in a short time.

The immediate result of the cancer was a ghastly facial deformity, the woman driven into seclusion and her nervous system badly wrecked.

After the line of granulation had been well established, and the cancer entirely removed, she was referred here by Dr. Huff for the plastic restoration.

**Examination.**

The nose was almost destroyed in its upper three-fourths, the tip and one ala being left. The body of the nose was represented by a cavity which exposed the remains of the septum and the cavities on either side of it. The profile of the nose was concave and its level just below the eyes was almost that of the cheek.

Cut No. 1.

November, 1909. Photograph not retouched. Shows one inferior turbinate and part of cartilage of septum.

**Operation.**

November 22, 1909. Ether anesthesia preceded by H. M. C. one-fourth grain. For giving ether the open method with a thick mask was employed first. After anesthesia was complete, a modified Junker inhaler was used, the delivery tip being a large douche point carried well back in the mouth towards the fauces.

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CUT No. 2.
Semi-digrammatic: done by artist from sketch made directly after the operation. Shows outline of flap on forehead.

Both nares packed with gauze to stop the flow of blood backwards and to compel mouth breathing.

The steps of the operation were four.

*First.*—Freshening the edge of the entire circumference of the defect, loosening it from the underlying bone and periosteum for one-fourth inch all around.

*Second.*—A pattern was made from sterile rubber tissue to fit the defect, then a flap slightly larger than this pattern was cut from the forehead, running obliquely upwards and to the right side close to the hair line. The neck of this flap joined the upper end of the defect at the base of the nose on the right side while its left edge was carried one inch outward and just above the orbital ridge. The flap included fat, fascia, and pericranium.

*Third.*—The flap hanging on its pedicle was turned down over the nose through an arc of one hundred and twenty degrees, and with very little trimming fitted nicely into place. A half dozen tension sutures of formalized catgut secured it, and the approximation was done with a continuous suture of horsehair on a fine needle.

*Fourth.*—The defect in the skin on the forehead was filled in with Thiersch grafts taken from the left thigh.

The entire wound was dressed with formalized gauze and cotton, covering it and both eyes.

CUT No. 3.
Same process as No. 2. Sketch is materially correct, except that artist gives patient too high a forehead. As a fact, the forehead was so low that the end of the flap almost touched the hair line.

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**Result of the Operation.**

The flap on the nose healed in place nicely and was almost perfect except for a slight beveling between it and the matrix.

Over the inner corner of the left eye where the pedicle turned on itself there was an ugly lump of wrinkled skin with a raw edge which healed slowly.

The skin wound in the forehead, which was four inches long by two inches wide, did poorly at first, only the upper and the lower grafts healing, the rest died and sloughed out, leaving the frontal bone exposed through the greater part of the wound.

This wound looked quite bad at first, but healed rapidly and in six weeks was nearly closed in.

**Second Examination.**

March, 1910. Four months after the first operation the condition was about as follows: The large wound on the forehead left by the removal of the nose flap had healed nicely by granulation. The deformity which we feared from the scar was not at all conspicuous, in fact the healing of this wound was astonishing.

The new nose was excellent and thoroughly healed, and the nostril, which was at first collapsed, had retracted slightly more than desirable, but the defect was hardly noticeable.

Cut No. 4.

Photograph not retouched. Taken March, 1910, four months after first operation. Scar on forehead shows prominent and dense.

Mass at left side of base of nose prominent and spoils perfect vision. The edges of nose scar are still slightly uneven.

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The bridge was thick and heavy, which took off somewhat from its cosmetic beauty.

There was a decided hump at the side of the base of the nose, from the redundant tissue where the pedicle turned on itself. I believed that this lump would atrophy if left alone, but the patient was sensitive and wished it corrected if possible.

**Second Operation.**

March 23, 1910. Four months after the first, under ether anesthesia, with the Junker inhaler. The hump on the left side of the bridge of the nose was dissected loose from the underlying bone for a distance of one inch above and below. The edges were trimmed away so that they could be brought together flat and smooth. Catgut and horsehair sutures were used for approximation and the little wound dressed as before. It healed nicely and the patient went home in a week.

Six months later, September, 1910, the patient returned, quite proud of her appearance and with very good reason to be. The scar on the forehead had decreased to one-third of its original size, was becoming vitalized throughout and scarcely noticeable.

CUT No. 5.
Photograph not retouched. Side view of face, same sitting as Cut No. 4.

The new nose had a surprisingly good shape and was almost perfect in contour. The left nostril was perfect, but the right had been drawn up perhaps one-eighth inch owing to the contraction of the flap on this side.

On the whole, the result from a cos-

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metic standpoint was amazingly good. The patient now goes out in public as she did before she lost her first nose. She is busy and successful in her work, and with it all there is a corresponding change for the better in her physical and mental condition.

similar to this, which we hope to report at a later date.

The lessons learned in watching (and almost nursing) these patients, so fascinative is the work, convinced me that every featural or facial defect can be enormously improved if not wholly cured

Cut No. 6.

Photograph not retouched. Taken September, 1910, ten months after first, and six after second, operation.

Scar on forehead much less noticeable and fading rapidly. Suture line along sides and end of nose very faint, bridge of nose symmetrical, although rather thick, right nostril slightly drawn upward.

Prior to this case the writer's experience with constructive surgery had been a generous number of perineal and cervical repairs, with a fair number of harelip cases, deformed ears and minor facial blemishes. As luck would have it, one plastic case brought another, so that we were able to begin a series more or less

by well-chosen plastic operations.

Successful results, however, demand unconditionally some experience in plastic work, a mechanic's eye, flawless aseptic technic, a perfected anesthesia method, and dependable, conscientious post-operative nursing and care.

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# Informal Chat on Therapeutics.

By George F. Butler, A. M. M. D.

Professor and Head of Department of Therapeutics and Professor of Preventive and Clinical Medicine, Chicago College of Medicine and Surgery. (Medical Department of Valparaiso University, etc.)

THE AUTHOR, while modestly designating his article an "informal chat" and indeed it is, so far as the simplicity of its language and style is concerned—really delves pretty deeply into the elementals of therapeusis. He shows how modern therapeutics, if it is to hold its own with modern medical science in other directions, must be intelligently grounded on laws and principles, for which we must go down to the very elements of cellular construction and pharmacodynamics. Touching the germ theory, the author expresses his opinion that many microbic diseases could be prevented and cured by an intelligent application of drug therapy just as surely and efficiently as by a therapy directed toward the germs themselves. He points out some of the popular fallacies of a misunderstood doctrine of heredity, maintains that the "soil" is hereditary, but not the "seed," and declares his belief that in tuberculosis and other infectious diseases better and safer results are to be obtained, as he quaintly expresses it, "by rendering the soil barren than by sprinkling Paris green on the backs of the bugs." The whole article is in Dr. Butler's usual sane, sensible, witty style, and contains lots of food for intelligent thought on the subject of therapeutics.

The mind hungers for principles. "Give me truths" is the cry of our profession today.

It is a satisfaction to have lived in a generation when medical science achieved its greatest victories, when it proved the law which alike controls the birth, growth, decadence and death of a monad or a planetary system—that law suspected, guessed at, but never comprehended until recently, when it became known that when an organ or a part of any living entity hesitated in its work that moment the destroying forces attacked it and did not rest from their labors day or night until they had taken it to pieces, reduced it to its simplest elements, and restored them to the common depository for use. The workmen in this process were once called decomposition and decay. We know them better now as the living laborers, the unbuilders of nature. These by countless millions are the enemies with which medical and surgical science has to contend. To obstruct their work, arrest their mysterious reproduction and clear them out of the human body is the herculean task committed to our profession.

The best minds of our profession have devoted their lives to the tracing of possibly a single symptom once called disease back to the law of its origin.

The diagnosis of disease in its most secret recesses—antiseptic surgery, pathology and bacteriology—are some of the fruits of these men's labors.

Every year the cause of science has been pressing onward. The advance in our profession has been marked by more triumphs and greater victories than in any other department of human endeavor.

Yet in the scientific application of remedies to disease the progress has not been so great.

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### Object of Drug Therapy.

We give drugs in disease for two purposes:

(1) To restore health directly by removing the sum of the conditions which constitute disease. Here we act empirically with no definite knowledge—often, indeed, with little idea of the action of our drugs, but on the ground that in our hands or in those of others they have restored health in like cases.

(2) To influence one or more of the several tissues and organs which are in an abnormal state, so as to restore them to or towards the normal; with the hope that if we succeed in our purpose recovery will take place. This purpose we effect by means of the influence which the chemical properties of drugs exert on the structure and functions of the several tissues and organs. Minute information, therefore, of the nature of the drugs and their action is essential for their proper employment.

### Nature of Drugs.

Drugs were formerly looked upon as simple substances having amongst other attributes the power of curing disease—indeed, the popular idea concerning them has not advanced beyond this view; but physicians now refer their influence to the textural and functional changes they are capable of effecting in definite portions of the body by virtue of their total composition, or that of certain chemical substances they contain. Not only do the elements of which a drug is constituted affect its action, but the way in which these elements are grouped and combined is of importance.

The effect which several of the elements exert in their compounds have been traced by Brunton, Ringer, Harnack, Binz and others. It has been shown that chlorine and bromine, potash, lime and many other metals always tend to act on certain tissues in a definite manner, unless their influence be neutralized by other elements with which they are in combination.

It has been shown also that small groups of elements may play a similar part in more complex compounds, that the action of $NH_2$ and $NO_2$, for example, can be as distinctly traced in the compounds in which they occur as that of chlorine or potassium or calcium. A compound containing that group $NH_2$ stimulates the medulla; a drug containing the group $NO_2$ acts on the vessels and dilates them.

On the other hand, in many of the organic compounds we are quite unable to trace the effects of the several elements; and it is rather the manner of grouping of the elements which seems to confer on the compounds their pharmacological and other properties. Two compounds may contain exactly the same elements and the same number of atoms of each, yet if these atoms be differently arranged, the compounds may differ entirely in pharmacological and other properties. Methyl nitrate and nitromethane have the same formula, but the oxygen and nitiogen atoms in the two substances are joined together in a different way. The result is they act quite differently; the nitrate dilates the vessels. Nitro-methane has no such action. Medicines are such by virtue of their reactions on living elements, and they come into being because of just such reactions. They simply are what they are; because it is a fact that neither your body nor the body of any living organized being, plant or animal, is a unit as it seems to be. Many think their own bodies one and continuous. They can understand nothing about principles of medical action while holding this idea. Our bodies are composed of hundreds of millions of little creatures, each one separate and distinct from yours, while their total constitutes you. We are simply built up of masses, each body being a host of living bodies. Far down in the scale of being our

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brooks and ponds reveal a form of life of a single unit or cell. A little higher up and we find many compacted in one, much as the coral insects unite their forces to form vast islands.

**Cellular Construction.**

Between unicellular and polycellular forms, every degree of combination does or has existed.

Examined under the microscope, human muscular tissue proves to be but a polycellular mass. Nerve structure, similarly treated proves to be the same. The white corpuscles of our blood are the freed units analagous to the unicellular creatures of brooks and ponds. Watched by the microscopist they are discovered to have a separate distinct life from yours. From them, as bricks, the building called your body has been erected. They can eat, sleep, be anesthetized with ether, awake, drink, excrete and do all you do that indicates life, except possibly to think. They have been actually caught in the act of killing and eating the red corpuscles so that there is every indication that cannibalism goes on in our arteries.

As I have said already the lowest form of animal life on our planet exists as a single cell. We call it Amoeba. The grouping of these simplest forms make the successive steps of progress. Amoeba-like bodies build all plants and animals up, even to man. The more complex the organism in which they are found the less their individual powers of adaptation to varying conditions become. High up in the scale, division of labor among them has gone on to such an extent that they are forced to depend upon their aggregation for continuity of life. At the bottom of the scale every cell is sort of "Jack of all trades," performing every function in a sort of a way. At the top each has assumed a distinct power or function of its own, which it does well. We have nerve cells, bone cells, cartilage cells, connective tissue cells and others. These have become perfected in a certain kind of work and depend upon their fellows to do all other necessary duties for them. They are like the perfectly organized army with a general in command. Orders are issued by this general, and each subordinate knows his share of the duty in obeying orders. From the frontal cerebral region of the brain emanate the conscious commands that go through nerve ganglia and muscles to come forth as voluntary action.

Why are you able to walk? Nerve cells and muscular cells are irritable. Muscle cells are able to contract. What we may call for convenience sake a telephonic message starts in the brain, passes through the white thread-like wires called nerves and reaches the muscle cells. You say "contract." They receive the message and obey. If you say "relax," they obey as promptly. This contractile power of muscle, however, does not reside in your will. Cut away the limb from the body and if you stick a pin in it, you will discover that it is still able to contract and relax, although quite free from your body. A heart removed from a body will continue to beat. On stopping, the prick of a pin will stir it to action again. Every part of your body has this independent life from you, and every part is differently affected by different drugs and in different doses.

The properties of drugs used as medicines are due to their specific power of producing certain modes of stimulation or depression in these aggregates of cells. The therapeutic studies of the future, in my opinion, will determine how certain cells react to certain drugs, and show how combinations of cells give their complex resultants.

**Old and New Pharmacology.**

The old anatomists dealt with the organs and described the relationships of the bones and muscles of the lungs and liver, without troubling themselves about their composition. The anatomy of the cell itself is now receiving attention,

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and the relationship of its different parts to one another is now examined with as much care as the old anatomists devoted to the relationship of the viscera. Physiology must follow a similar course to anatomy and deal not merely with the functions of organs or tissues, but with the functions of the cell, the phenomena of respiration, circulation, tissue change, motion, growth, reproduction, decay and death in relation to single cells.

Pharmacology dealt first with the action of drugs upon general functions. Your materia medica teaches you that after the administration of certain drugs the respiration is accelerated, temperature is lowered, increased tissue change, red blood corpuscles increased, etc. We shall know some time just exactly how actions are produced by knowing the action upon individual cells, as we now understand the action of antipyretics and the action of quinine in relieving and curing malaria, by destroying the organisms of malaria in the blood, which are the lowest form of cellular life. Quinine I class as a restorative because it is anologous to taurocholate of soda, an ingredient of the liver, and this brings to mind some ideas in regard to the germ theory of disease.

**Methods of Cell Destruction.**

To repeat, it is a law suspected, guessed at, but not yet comprehended by all, that when an organ or part of any living entity hesitates in its work, that moment the destroying forces attack it, and do not rest from their labors day or night until they have taken it to pieces, reduced it to its simplest elements and restored them to the common depository for future use. The cells of the lung, that are vigorous and energetic, do not succumb to these living laborers, the unbuilders of nature, but let them hesitate or become weakened by acute disease heredity, unhygienic surroundings and it may succumb to tuberculosis. We see in organic life everywhere an attempt to withstand the attacks of bacteria and disease. Bacteria wage war on cells, whether animal or vegetable, and both kinds must defend themselves or perish. The cinchona tree defends itself by generating in the bark as a substance, quinine, so called, which destroys the bacillus of malaria. Nux vomica develops strychnine in large quantities to withstand the attacks of the acari. Exceedingly poisonous beans are either let alone or they kill the attacking acari. Use, or probably some substance in their system, enables them to endure more and more of the strychnine, however, and it becomes "nip and tuck" between them as to which shall be the victor. Only such beans as beat the mites produce trees, and only such mites as beat the beans multiply. The alkaloid is the plant's weapon of defense. There is a substance formed in our livers which is our weapon of defense against the bacillus of malaria. You and I go into a malarial climate, you get fever and ague, and I do not, not because you get the malarial poison and I do not, but because you are weak in defense.

Bacteria use a kind of alkaloid known as a ptomaine as a means of attack. It enables them to multiply freely within their hosts. But animals and men, not to be outdone by fungi or plants, likewise produce a kind of alkaloid we call a leucomaine, which it is quite probable is their defense against some very general enemy not as yet really known.

**The Microbe Doctrine.**

With all due respect to many able physicians, we have not succeeded in tracing all infective diseases to neuro-organisms by any means, and I believe further researches will greatly modify the views now commonly held with regard to the relation of microbes to disease.

Phagocytes play an important part in the struggle against disease. From these we see that a likeness may be observed between the body corporeal and the body corporate, and that the death of a mouse

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from anthrax may be compared with the destruction of the Roman empire by the savage hordes who invaded it. The anthrax bacilli after invading the organism enter into conflict with the cells belonging to it, and if the invaders be few and weak they are destroyed, and the organism preserved; but if the invading bacilli are numerous and powerful they destroy the cells which they encounter, and death of the organism is the result.

For a good while the microbes were looked upon (and are to this day by some) as directly causing disease by affecting the tissues of the patient, but many of the symptoms which occur in consequence of the action of microbes are due, not to their direct action upon the tissues, but to their indirect action in forming poisons. The symptoms they produce bear a similar relation to the microbes as the symptoms of intoxication bear to the yeast plant. Yeast does not produce intoxication. It is the alcoholic products of its action upon saccharine fluids which make a man drunk.

It is evident that if the disease or symptoms were always due to the microbes themselves, it would at once cease if these "pesky" things were killed, but if it be dependent upon a ferment which is secreted by the microbes, it may continue to a certain, though limited, extent after they have been destroyed, just as pepsin which is secreted by the stomach of a pig may carry on digestion after the pig itself has been killed.

Furthermore, it is possible, and very probable, in my opinion, that many of our so-called microbic diseases could be prevented and cured without any medicine given directly to the bug or to antagonize the poisonous action of its ferment or ptomaine, but some method of treatment directed to the patient which will stimulate the cells to overcome the disease or poison.

It is so difficult to administer medicines which will kill the germs or destroy their products without killing our patients.

We dare not shoot the wolf that is attacking our dog, but we cheer on our dog and pull his tail and he does the rest.

**Fallacies of Heredity.**

We sometimes speak of disease as hereditary, but this is not strictly correct. The tendency of disease is no doubt hereditary, but the disease itself is not, at least in those cases where it is due to a microbe. Such diseases require two factors for their occurrence, just as a crop of grain does for its growth. The first factor is the microbe, which may be regarded as the seed, and the second is a condition of the organism which we may compare to the soil suitable for its reception. The soil is hereditary, but the seed may or may not be sown in it, and just as the field without the seed will produce no crop, however good the soil may be, so if the microbes be absent disease will not occur, however great the susceptibility of the individual may be. For example, we not infrequently speak of the hereditary nature of consumption, yet we are constantly meeting with persons belonging to very consumptive families who escape disease by living under conditions where the bacillus tuberculosis is likely to be absent, or by so improving their health that the soil is rendered barren. On the other hand, physicians and nurses are, in all probability, frequently inhaling the germs and yet are not attacked by the disease. One case immunity is probably due to the absence of the seed, notwithstanding the favorable nature of the soil, and in the second it is probably due to the barrenness of the soil, notwithstanding the presence of the seed. But just as the seed falling on a soil adapted to its growth will germinate and yield a crop, so microbes which find within an organism conditions suitable to their growth may multiply and cause disease.

As two factors are supposed to be re-

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quired for an attack of infective disease, viz., a disease germ and a suitable soil, it is evident that we may try to prevent it either by destroying the germ or by rendering the soil unsuitable.

In my opinion, in tuberculosis and many other infective diseases we can accomplish the result, with a great deal more safety to the patient, by rendering the soil barren, than by sprinkling paris green on the backs of the bugs.

However you may treat case of infective or non-infective disease, you must know just what you want to do and just how you are going to do it.

We must know our drugs. We must study the weapons with which we combat disease, as well as the disease itself.

The chemistry and action of opium even is not yet thoroughly understood, although it has been subject to lifetimes of conscientious investigation. We are as yet looking in an unknown field that has boundless limits. Our intellect fails to comprehend the possible action of the countless substances that influence vital action and thus modify disease expression.

"But few of our chemical compounds that may exist have been produced as yet," says Lloyd, and adds: "Our own native flora holds treasures that are but waiting for some investigator to lay bare, and still there are thousands of plants in the unexplored regions of Africa and South America yet to be studied, many, for ought we know, possessing as great medicinal value as opium, cinchona or nux vomica."

There is offered now an opportunity for a most valuable and interesting study, *i. e.*, cell pharmacology, the study of the action of drugs upon individual cells. This study certainly invites comparison with that of any other in medicine.

While hundreds of able men are devoting their lives to the study of pathology and to the study of the pedigree, posterity, and properties of germs organic, can there not some be found who will labor to develop materials and methods that will prolong life and mitigate suffering and pain?

**How to Study Therapeutics.**

I beg of you, do not learn your materia medica and therapeutics from the literature furnished by manufacturers of proprietary preparations, which masquerade under a title bearing but the faintest relationship to their empirical constitution—like the Widow Bedott's pies, which were pumpkin pies in the abstract, but in the last analysis were principally ingredients. When you realize the importance of a thorough knowledge of materia medica, and become enthusiastic investigators in the study of the action of drugs in different doses not only upon functional organs, but upon the individual cells, you will be better therapeutists and better doctors.

The prospects of therapeutics appear to me very bright. At present, most of the drugs which we are obtaining from the chemist belong to the classes of antipyretics, analgesics or hypnotics, but I think, with Bownton, who says that it is highly probable that before long we shall have a series of drugs which will stimulate the biliary secretion of the liver or modify its glycogenic function, arranged in order of their comparative strength, in much the same way we have now the class of antipyretics.

We may also look for a series of remedies which will modify the circulation by dilating the blood vessels not only temporarily, but more or less permanently, and will thus afford relief not merely in transient conditions like angina pectoris, but in the prolonged high tension of chronic Bright's Disease.

Now here is an opportunity for some original investigation. One may work long and faithfully only to pave the way for others to clean the gold within the mine he has dug and perhaps abandoned. Such are the exigencies of life that must be borne patiently.

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# The So Called Medical Treatment of Appendicitis.

By Edward Wallace Lee, M. D., New York City.

DOING or leaving undone, in the face of disease, those things which in the very nature of the case must perforce be done or left undone, is not, according to Dr. Lee, to be dignified by the name of treatment. Upon this understanding he denies that there is any medical treatment of appendicitis, since all of the measures advocated under the so-called medical treatment of this condition resolve themselves into measures which the very nature of the trouble renders indispensable. Other measures, on the medico-surgical border-line, such as ice-bags and stupes, are, in the author's opinion, utterly useless against the infective process in an inflamed appendix. His conclusion is, that there is not a medical treatment for appendicitis, but surgical interference is indicated as soon as the disease is properly diagnosed. We do not, of course, necessarily endorse Dr. Lee's views. He speaks for himself, and his statements are presented to our readers for their own judgment.

When physicians desire to treat appendicitis by what they term medical treatment, there is one essential point which they should constantly keep in mind, viz., that appendicitis from its very beginning is a possible surgical disease. They should not fail to comprehend that at any time, even in the apparently mild cases, the disease is liable to demand surgical interference. Therefore, the medical man, if he insists, or feels justified in treating his case medically, his treatment should be along the lines that would prepare his patient for an operation, and he should be careful to avoid any method of treatment which would interfere with or complicate surgical procedure.

Correct diagnosis is absolutely essential; at the same time I recognize the difficulty in making a perfect diagnosis. A patient presents himself with the following symptoms: General or localized abdominal pain, vomiting, rapid pulse, indifferent temperature. What causes these symptoms? Several things must be taken into consideration: duodenal ulcer, gall bladder disease, pathological conditions in the neighborhood of the appendix, etc.

The cardinal symptoms which would lead one to suspect appendicitis are a rapid pulse, with indifferent temperature, rigidity of the right rectus muscle, and tenderness over the various spots in the right iliac region, viz., the familiar point of McBurney, and also, emphatically, the point that Dr. R. T. Morris has recently emphasized, which is as characteristic and as pathognomonic of an inflamed appendix, if properly appreciated, as any sign that can be observed.

Presuming now that the above symptoms are before the general practitioner; suppose he is inclined toward the medical treatment of appendicitis, what does he do? He resorts to various forms of medication to reduce the temperature, to control the pulse, and to lessen the pain; to diminish the abdominal tenderness, to relax the abdominal rigidity, and as he says, "cure" the appendicitis without surgical interference.

### Fallacies in Medical Treatment.

If his treatment is always directed along the lines that will prepare his patient for rational surgical interference he may be doing good work, but if his intention is to "cure" the patient of appendicitis without taking into considera-

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tion the possibility of his case becoming one demanding surgical interference he is doing absolutely wrong and is jeopardizing, not only his own welfare, but what is more essential, the life of his patient.

His treatment he may call the Ochsner treatment, the so-called "starvation" treatment. In 99 per cent of the cases this treatment is not a treatment, for the patient's condition is such that the withdrawal of food is absolutely necessary. What sense is there in trying to administer food to a vomiting patient, whose condition is aggravated by the attempt? The Ochsner treatment must have grown out of the fact that you cannot give food to a patient who is constantly vomiting and retching. "Starvation" under these circumstances is no treatment, rather adapting one-s self to circumstances over which he has no control.

Then the medical man is tempted to apply the ice bag. This application of the ice bag may in certain cases of pain in the right iliac region relieve the immediate suffering, and a prompt recovery from the various symptoms may be noted in a short time. Unfortunately, I am not a bacteriological expert, therefore I cannot go into the discussion of the various forms of micro-organisms which start up appendicitis; these differ in form, character and action, and I honestly believe that if a virulent micro-organism has attacked the appendix nothing in the form of an ice bag, or any other local application, or internal medical treatment will in any way mitigate its destructive action.

These so-called cases of catarrhal appendicitis that have been cured by the ice bag, I believe, would have recovered under any treatment or no treatment at all.

The internist with his starvation and ice bag treatment has no right morally, pathologically, or any other way, to administer opiates. It is the opiate with the ice bag that benumbs and masks the true condition, and until this condition is properly recognized the victims of appendicitis will not receive the treatment adequate to their condition. When a case is recognized as an operable one, and is to be operated on within a very few hours, the administration of a judicious dose of morphine hypodermically administered, and the application of the ice bag are justifiable, but as curative agents they have no place in the category of scientific medication. With all due respect to the internist I humbly submit the following suggestion:

**Preparing for the Surgeon.**

Whenever a diagnosis of appendicitis is made, I advise the withdrawal of food, thorough evacuation of the intestinal canal, the application of the ice bag, the hypodermic administration of the necessary dose of morphine and the immediate call for a surgeon. With this preparatory treatment, the surgeon is in a position to render most valuable assistance. These so-called "interval" operations are at times quite proper, but for an internist to claim that he will not permit his case to be operated upon only during the interval is a very dangerous proposition. Many of these resemble the statement of the small boy eating an apple. When asked by his playmate for the core, said, "There ain't going to be no core." In many of these cases of appendicitis there is *not* going to be any "interval," except that which exists between the attack and the funeral, unless surgical interference is resorted to. If the patient is fortunate enough to escape from a mild attack, operation should follow as soon as possible.

**Asthma.—**

Williams recommends the following mixture for local use in this complaint:

| | |
|---|---|
| Cocaine hydrochlor | gr. ij |
| Atropin sulf | gr. ij |
| Sodii nit | gr. x |
| Glycerin | gtt. xx |
| Aquae q. s | oz. ss |

to be inhaled by a fine spray, five to ten minims at a dose.

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# The Special Senses as Diagnostic Agents.

By Frederick Eiche, M. D., Lincoln, Neb.

Professor of Descriptive Anatomy in the Nebraska School of Medicine, Lincoln, Nebraska.

IN THE rapid and marvellous development of the objective means of diagnosis, there is always more or less danger of forgetting or belittling the importance of the subjective factors in the process. Dr. Eiche calls timely attention in this article to the necessity for developing the subjective elements in diagnostics, namely, the special senses, to which, after all, the various instruments of precision submit their data as to a supreme court of decision. The vision, the hearing,—these are the two prime arbiters of physical diagnosis; and unless these keep the city, they labor in vain who watch it. As we have said, this warning is exceedingly timely in these days when one is prone to expect a diagnosis ready-made from the test-tube or the microscope.

In order to be a good diagnostician every physician must have a sound physioligical standard for comparison. The man of health is the physiological man. Likewise the pathological man is the one who has departed from this standard. If this be true, then surely we must take this physiological man as our standard of measurement. The fixed point from which we make our comparisons and draw our conclusions. This physiological fixed point bespeaks certainty.

Disease is wrong life, and a wrong presupposes a right. We many times fail to recognize disease as a wrong of life because we lack the physiological standard of comparison.

Essential facts in exact diagnosis can only be acquired by close observation resulting in the cultivation of our special senses. The higher this education the greater our success. Of the truth of this statement there can be no doubt. A man's conscious life is in and through his senses, the enlargement of which brings added compensations. Nature bestows her gifts lavishly upon him who through the senses has unlocked her treasure house. A physician who successfully treats diseases of childhood places little value on what is told him by an over-anxious mother or nurse, but readily interprets the language of wrong life as expressed by these little sufferers. The application of remedial agents under these conditions afford relief to the patient and much satisfaction to the physician. What is true of childhood applies equally to all ages.

Color being one of the most prominent characteristics of health and disease, naturally requires education of sight, the most important of our senses. An uneducated eye cannot detect the slight variations of color, form and tonicity so essential in the treatment of disease conditions, the recognition of which is of vital importance and oftentimes proves the pivotal point upon which success or failure depends.

Hearing: What a long list of failures we can attribute to a blunted sensibility of these organs. It is true we hear, but what? Oftentimes nothing but noise, and, becoming discouraged, turn our cases over to the specialist and acknowledge defeat. "Ears ye have and hear not" applies to us as forcibly today as when uttered by the Master ages ago in

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teaching his religious truths. Poets sing and tell us all Nature is vocal with sound. Natural history bids us enter her school and be taught the love songs of the birds—their notes of victory, their wails of defeat. Fascination of the study of sound grows rapidly and carries with it its own peculiar rewards. The cry of pain or hunger, the different sounds elicited in the thorax and elsewhere in the body are wonderfully interesting and important, and to the trained ear alone intelligible. What is true of sight and hearing is equally true of touch, and to a lesser degree of taste and smell. I do not wish to weary the reader with details along this line and neither do I make the claim of saying anything new in the statement that while our sense organs are a part of us at birth, their development must be acquired—the result of persistent education. Hence, the man with educated senses will have every advantage over the man not thus developed.

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### A PLEA FOR FAIR PLAY.

The *American Journal of Physiologic Therapeutics* thinks that, when a periodical with the standing of the *British Medical Journal* has for a leading article a favorable treatise upon osteopathy and a recital of cures of "incurable" cases by this method in the hands of a prominent physician; when an institution with the fame and conservative traditions of the Massachusetts General Hospital appoints an osteopath to its service, and when a national medical organization invites an osteopath to address one of its meetings, it would really seem that the time had come for the general practitioner of medicine to look at this matter fairly and squarely.

We do not mean that we believe in osteopathy any more than in any other "pathy." The day of therapeutic *beliefs* is past. This is the day of *facts* and of a thorough scientific search for facts. Because of this the attitude of institutions, medical journals and physicians is changing, and those who are consistently scientific and humanitarian are no longer afraid to recognize a truth and a help, even if it be labeled "osteopathy," or, for that matter, anything else. Osteopathy has its faults, but so have we. Osteopathy may have more faults than any other school of practice. What if it has? That is hardly the point. The point is that the osteopaths have proved that they can do some things better than they have been done heretofore; therefore, we suggest that the family physician avail himself of this fact in his work, and utilize the osteopath when indicated, just as he does the surgeon, the dentist, the oculist, the orthopedist or any other specialist. It is sometimes argued that many osteopaths are ignorant, but ignorance is not monopolized by any school of practice, and competence may be discovered in their ranks by the same method you would use to decide upon your surgical consultant.

In these days of drug nihilism it is refreshing to find positive therapeutics, and while few of our readers would be ready to accept the osteopathic theory as a whole, it would not be inconsistent with the tendency of the times for every physician to look into osteopathy with an open mind and try to discover why it is receiving the recognition in high places which is today being accorded to it. If you are shocked to read such as this here, read the title of this publication, think it over carefully and without bias, and then ask yourself frankly if it is inconsistent for a magazine with this title to insist upon its honest search for therapeutic truth ***no matter in what field it may be found.*** We are not hereby committing ourselves to osteopathy in the least degree, nor are we endorsing it in any way. We ask for frank recognition of whatever is scientifically true—for "fair play."

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# Constipation.

By R. D. Mason, M. D., Omaha, Neb.

Professor of Rectal and Pelvic Surgery in the John A. Creighton Medical College; Surgeon to St. Joseph's Hospital; Consulting Surgeon to Mercy Hospital, Omaha, Nebr.

NATURALLY, the author, being a specialist in rectal and pelvic surgery, leans toward the consideration of the more mechanical and local causes of constipation, i. e., those causes which have their ultimate field of expression in some condition of the lower bowel. As a general rule of treatment he deprecates the use of drugs, unless every other means has been exhausted, and recommends proper training of the bowels, daily exercise in the open air, sensible diet, and, if necessary, massage of the abdominal walls to strengthen the muscles. When drugs seem to be necessary, he advises beginning with a daily minimum quantity of whatever seems most desirable, gradually decreasing the dose until the medicine can be done without. Aloes, nux vomica, ipecac, and belladonna are among the drug agents he favors.

Constipation at best can scarcely be called a disease, but is more properly spoken of as a symptom of some abnormal condition, especially chronic indigestion. It may, however, be the result of other causes than ill health, often being simply a habit or the effect of sedentary occupation or unsuitable diet, or due to a lack of attention to the calls of nature, as is often the case among ignorant persons who do not regard the care of their health as of importance. The lower we go in the scale of intelligence the more we find constipation and its attendant evils, including obstipation and fæcal impaction as prominent characteristics. Again, constipation may be inherited. It is not uncommon to find infants, who are otherwise in perfect health, constipated from birth.

Constipation may be the result of acute causes, as pain from an irritable ulcer; or mechanical causes, as pregnancy, stricture, tumors, etc. A very common cause, especially among females, is the lack of convenience for attending the calls of nature. They are often away from the vicinity of the toilet room when the desire is felt, or the toilet room is situated in a cold, dark place, or so public that modesty compels them to postpone the matter until the desire passes away. This being continued for a long time, nature finally rebels, and the sensitive nerves of the rectum become blunted and no longer convey sensations to the brain. This part of the process is purely involuntary, and when felt should receive prompt attention, as it is nature's signal that an evacuation is desired. From this point on, however, the process is under almost complete control of the will and may be disregarded, in which case the fæcal mass is lifted back into the sigmoid, where it remains for another twenty-four hours, when it again passes into the fæcal pouch and nature once more announces her desire to get rid of waste matter, as she is always ready to do her part and exacts a severe penalty for the disregard of her laws, and no exception has been made in these cases.

One of the most frequent causes of constipation, especially among children, is the fact that the food is too thor-

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oughly digested and too little residue is left in the bowels to act as a stimulant and produce the necessary peristaltic movements. Children, after they have passed the age of two years, who are fed exclusively on milk diet with no solid food, are almost invariably constipated, due mainly to the fact that the casein of the milk does not produce sufficient volume to distend the bowel and produce the necessary peristaltic action. This is also seen in adults who partake only of highly nutritious, well-cooked foods that are nearly digested in the stomach and upper part of the intestinal canal. A certain amount of residue and substance for the maintenance of the life of intestinal bacteria, which produce gases of sufficient irritability to cause peristaltic action, are absolutely necessary.

**Principles of Treatment.**

From what has already been said, it is at once apparent that the treatment should consist in removing the cause. Sometimes this is all that is necessary, but often it will not suffice as the habit has become so fixed that it will require a long time and much patience on the part of both the patient and physician to effect a cure. There is probably no one thing so important as to get the bowels back into the habit of moving at a regular time. The patient should be taught that it is the most important event of the day and should never, under any conditions, be neglected. He should be told to exercise in the open air as much as possible; not simply stroll 'round the block and back again, but take a brisk walk of a mile or two every day. Bicycle or horseback riding or any form of exercise that will bring all the muscles into play and start the blood to flowing more freely will be of benefit. Frequent baths will be beneficial, as well as massage, especially of the abdomen, following the direction of the colon. Diet should be very carefully regulated, and food that will leave a fairly large amount of residue to fill the bowel and act as an intestinal irritant should be recommended. The general health should be carefully attended to, and the food of the most easily digested and nutritious character. This should contain such articles of diet as are known to prevent constipation, such as fresh fruits, rice, prunes, cereals, vegetables, brown bread, wheat broths, oyster soup, etc.

If the bowels do not move without some artificial stimulus, a glass of some alkaline mineral water should be taken at night and morning, not as a cathartic, but to keep the bowel contents soft and non-irritating.

**Drug Therapy.**

Drugs should be used only very sparingly, and not at all if possible. If medication is required, beneficial remedies are numerous and none need lack for variety. I believe that mild alkaline mineral waters do no harm even if taken for a long time, or until they, with other means, brings about a normal condition of the bowels. Many times a glass of cold water taken at bed time, and a glass of hot water taken an hour before breakfast are of benefit.

If a cathartic is necessary, begin with a minimum daily amount of whatever one seems most desirable, preferably fluid extract of cascara sag., giving the amount required in three doses, one before each meal. It usually requires ten drops three times a day to produce the desired result. After a week, one drop is omitted from each dose, and the amount of the dose is decreased one drop each week until the end of medication is reached. If it is necessary this dosage may be repeated, beginning the second time with about one half the dose, or five drops, decreasing each week as before. If other things have been attended to the patient should now discontinue medicines entirely. The following prescription I have used with good results:

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Ext. Aloes.....½ gr.
Ext. nux vomica.....1/24 gr.
Ext. belladonna.....1/100 gr.
Oleoresin capsici.....1/500 gr.
Pulverized ipecac.....1/120 gr.
M. and make pill.

I think the above pill is improved by the addition of a small amount cascara sag.

**Continuous Cathartics.**

In cases where it is necessary to continue cathartic remedies because of the impossibility of affecting a cure as in old persons who are ill from other causes, or in cases of pregnancy where it is necessary to keep the patient in condition until the child is born, I have found the following most excellent:

Cascarini .....¼ gr.
Aloin .....¼ gr.
Podophyllin .....1/6 gr.
Ext. bella donna.....⅛ gr.
Sulphate of strychnine.....1/60 gr.
M. and make pill.

In treating persons for constipation who are effected with any rectal trouble, aloin, gamboge and remedies of this class should not be given as they have an irritating effect upon the lower bowel. But remedies that are indicated are such drugs as cascara, senna, sulphur, nux vomica, ipecac, etc.

The treatment of constipation is one that requires a great deal of care and attention to details, both on the part of the physician and patient. If such care is given and details attended to almost every case of constipation may be permanently cured. If not, a successful result need not be expected.

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## EUQUININ.

*Folià Therapeutica* thinks that euquinin has been before the profession long enough to warrant the statement that it has established a permanent position among the new preparations. It is a carbonic-ethyl-ester of quinin, and is in the form of acicular insoluble crystals. It contains more of the alkaloid than quinin sulphate, but a little less than the hydrochlorid. The chief advantage of the preparation is the absence of the bitter taste of ordinary quinin compounds, and this circumstance allows of its easy administration to children. This is of special importance in cases of whooping cough, wherein if any drug possesses some specific action it is quinin. The bitter taste of quinin has undoubtedly militated against its general use for children, but many authorities who have employed euquinin for this disease assert that the attacks are diminished and that the spasms disappear: in fact, pertussis is speedily converted into a simple bronchial catarrh. Euquinin should be given in the same doses as quinin sulphate. Symptoms of cinchonism appear to be very rare after euquinin, and it is therefore valuable as a substitute for the ordinary quinin salts when they cannot be tolerated, because extended clinical experience has shown that euquinin can be put to all the therapeutic uses of the quinin preparations usually in vogue.

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## THE TREATMENT OF MIGRAINE.

The following prescriptions are well known and are recommended by Rankin, in the *Clinical Journal:* (a) chloride of ammonium, 15 gr.; phenacetin, 10 gr.; codeine, 1-3 gr. (to be dispensed either in the form of a powder or of two cachets); (b) antipyrin, 10 gr.; salicylate of sodium, 10 gr.; tincture of gelsemium, mxv.; spirit of chloroform, mxx.; water to one ounce; (c) heroin, 1-12 gr.; dilute hydrobromic acid mxxx.; citrate of caffeine, 5 gr.; compound tincture of cardamom, mxx.; chloroform water to one ounce. In the case of all of them directions should be given for a dose to be taken every two hours for three doses; and every four hours thereafter until the pain is relieved. In women in whom the migrainous attacks recur only at the menstrual times, the use, for a week before each period, of a mixture of chloral hydrate, 10 gr., and bromide of sodium, 20 gr., given 3 times a day, is often successful in suppressing the attack or in diminishing its severity.

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# CURRENT MEDICAL LITERATURE.

## COMA.

THOMAS Cheatham, in the *New York Medical Journal,* thinks one of the most serious problems an ambulance surgeon is called upon to solve is the diagnosis, treatment, and disposition of prisoners who are discovered in an unconscious state a few minutes to many hours after being locked in a cell.

Many cases have been reported where a man under the toxic influence of a powerful narcotic or with a fractured skull has been arrested and imprisoned on a charge of acute alcoholism, then left alone to die because the fumes of alcohol were detected on his breath and the ignorant patrolman or careless physician had been blind to all other symptoms. One drink produces an alcoholic breath for several hours, and even this drink may have been given by a modern Samaritan, whose sympathy, friendship, benevolence, and knowledge are concentrated in a whisky bottle. Careful examination and a few clear-cut points of differential diagnosis reveal the facts in most cases. The symptom complex, however, must be taken into consideration as no hard and fast rule is reliable in making a diagnosis, and two or more widely different conditions may coexist causing a conglomeration of symptoms sufficient to mislead the most experienced diagnostician. Unconsciousness may be due to compression of the brain, apoplexy, alcoholism, opium poisoning, uræmia, epilepsy, heat stroke, diabetes, hysteria, etc.

*Cerebral compression,* whether due to abscess, intracranial haemorrhage, tumors, foreign bodies, or a depressed fracture, is ushered in by mental excitement, restlessness, flushed face, vomiting, and a slow pulse which becomes slower, regular, and strong. Then follows dullness, drowsiness, stupor, and finally coma accompanied by stertorous respirations which frequently assume the Cheyne-Stokes type. At this stage there may be involuntary evacuations of urine and fæces, the pulse becomes weak, intermittent, compressible, and progressively rapid. The pupils are frequently unequally dilated and do not react to light. The presence or absence of paralysis depends upon the extent and location of the compression.

In *alcoholic coma* the unconsciousness is not absolute, pressure on the supraorbital nerves almost invariably arousing the patient temporarily; an alcoholic breath is always present; no paralysis exists; the pupils are equal and react to light; the pulse is more or less rapid; and the temperature, if altered, is subnormal.

*Apoplexy* may occur simultaneously with brain injury, uræmia, or alcoholism, beginning with a single severe convulsion following which total unconsciousness occurs together with hemiplegia, slow, full pulse, unequal pupils, which do not react to light, and in the early stage a subnormal temperature. Marked arteriosclerosis and old age strongly predispose to this condition.

*Uraemic coma* is characterized by repeated violent epileptiform convulsions which involve the muscles of the face and hands, rapidly spreading over the body, subnormal temperature, usually œdema of the legs, exaggerated knee jerks, and contracted pupils. No paralysis or stertor exists. Drowsiness and delirium precede actual coma.

*Opium poisoning* produces coma which comes on slowly. There may be or may not be the odor of laudanum on the breath. Pin point pupils are almost diagnostic. The respirations are slow, shallow, and quiet, or may be stertorous; pulse slow and full; temperature subnormal. No paralysis exists, and the patient may be temporarily aroused by

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vigorous shaking, or by shouting in his ear, but immediately goes back into a deep narcotic sleep, and if he speaks at all, it is to beg to be allowed to sleep undisturbed.

The *coma of epilepsy* is sudden in onset, unconsciousness is absolute for a time, the respirations are stertorous, and there is often bloody froth about the mouth. The convulsions are characterized by a tonic spasm of a few seconds duration followed by clonic spasms which last a few minutes and probably coma varying in duration from a few minutes to a few hours.

In *diabetic coma* the odor of acetone is detected in the breath, the onset is sudden, vomiting is the rule rather than the exception, and the respirations are slow and deep. Laboratory findings and the history of the patient are indispensable in confirming the diagnosis.

*Hysterical coma* occurs in boys and women of a nervous temperament. No objective symptoms can be relied upon as diagnostic. Complete unconsciousness may be present, but usually a few whiffs of strong ammonia will bring about a very gratifying result.

*Heat stroke* may be easily distinguished by the unusually high temperature, sudden onset, and history of exposure. The lividity of the face, followed by cyanosis, is characteristic.

When any doubt exists as to the ætiology of any case of coma, the patient is removed to the hospital at once, his stomach lavaged, colon irrigated, urine analyzed, eyes examined with an ophthalmoscope, and the patient is treated for brain injury until the diagnosis is made clear.

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## REMOVING ADHESIVE PLASTER.

E. G. Beardsley, in the *Journal A. M. A.*, remarks that such a frequent and simple procedure as the removal of adhesive plaster from the skin of a patient is not infrequently accompanied by considerable pain and discomfort. Especially is this true if the plaster has been placed over hairy surfaces, or if the hair has grown subsequent to the application of the plaster. The usual methods of aiding the removal of the plaster by the use of benzin, alcohol and peroxid of hydrogen are not particularly effectual while, in themselves, these agents often add to the patient's discomfort.

The author discovered by accident that oil of wintergreen when applied to adhesive plaster removed completely the adhesive elements in a very short time and since that time he has found this agent a most useful one for this purpose. It is necessary only to use a small amount of the oil, which is applied directly to the plaster and easily spreads itself throughout the adhesive material. The author thinks this agent is not in common use for this object and as the aim of a physician or surgeon is to relieve instead of causing pain it seems well to call the attention of the profession to the value of the method. When extensive areas of plaster are to be removed the application of an ointment of adeps lanæ hydrosus with 10 per cent of oil of wintergreen incorporated is even more useful than the oil alone.

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## THE CORSET AND THE BREASTS.

Ella K. Dearborn, of Portland, Ore., scores one against the corset in the following case report:

Mrs. H., a woman of 52 years, came to consult me concerning her breasts. For six months they had been so sensitive that the lightest clothing gave her intense pain, but as she was passing through the menopause, she attributed the sensitiveness to uterine sympathy, and did not seek relief until the pain became absolutely unbearable.

Examination showed both breasts very sensitive, and the nipples standing out, red and inflamed—and that was all! The glands were normal, the uterus and appendages in excellent condition, general health of the best.

The condition was painfully apparent, but what was the cause? There was no

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irritation; had been none, that she could recall, to cause all this trouble.

I applied G. M. P. to the breasts, and gave Bell, internally, and asked her to return in three days, which she did.

I was much surprised to find the inflammation as great as ever, the nipples standing forth, red and angry, in their generous coat of dressing; G. M. P. never disappointed me before.

I applied a Merc. dulc. cerate, and instructed the patient to return next day. That night I happened to think the patient's corset might be the cause of the trouble, and, though she had denied any irritation, I determined to investigate for myself.

The next day I removed the cerate, asked her to stand erect—the nipples rested on the upper edge of the corset; every time she moved or breathed the nipples were pushed up, and this continual sawing was the cause of all this trouble.

I told her to go home, take off her corset, and leave it off for three days, discontinue the medicine, and return in three days. This she did, and examination showed the breasts normal, every trace of inflammation and irritation gone.

I was ashamed that I had been so long in getting down to the cause, but the patient gave me no time for self-condemnation, for she exclaimed: "Oh, Doctor, had I gone to any other physician in this whole city, they would have amputated both my beautiful breasts before this, and here I am now, sound and well!"

Of the praise or blame that is given us, how much can we honestly claim? How much really belongs to us?

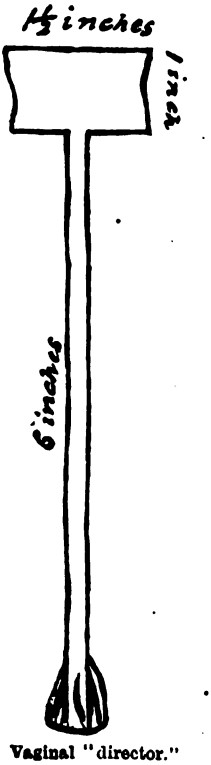
* * *

## VAGINAL DIRECTOR FOR HYSTERECTOMY.

To render the division of the vaginal walls more easy and rapid, Clennell Fenwick has made an instrument, which he describes in the *Lancet*, which acts very satisfactorily. It is practically a vaginal "director," and consists of a straight handle which carries at one end a flat plate 1½ in. wide, and 1 in. in length.

This plate is slightly curved like a duckbill. Before opening the abdomen the operator pushes the plate into the anterior fornix, and leaves the instrument lying there.

As soon as the uterine arteries are ligated the instrument is pushed upwards by the nurse and defines sharply the anterior wall of the vagina. Upon this




Vaginal "director."

support the wall can be divided by knife or thermocautery without the least trouble. When the anterior wall is divided the instrument is passed into the posterior fornix, and the uterus being pulled forward, the posterior wall is seen very well defined, and division is easy.

A second suggestion is the treatment of a diseased cervix.

To avoid any infection of the abdominal cavity it has hitherto been imperative

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that the ulcerated surface should be scraped or cauterized.

A method which Fenwick thinks much simpler is as follows: A volsella is clamped upon the cervix before the abdomen is opened. The instrument described above is pushed into the anterior fornix. The abdomen is then opened and the usual steps of a hysterectomy performed. When the uterine arteries are ligated the uterus is amputated above the cervix, care being taken to protect the surrounding parts with sponges. The walls of the vagina are then divided upon the little instrument described, and the cervix is withdrawn per vaginam by traction on the volsella. By this procedure no infection of the abdominal cavity can occur.

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### WRONG WAY TO DRINK MILK.

Dr. Kellogg tells of suggesting to a patient that milk would be a good diet for him.

He said, "Oh, I cannot eat milk. The last time I took milk it nearly killed me."

"How is that?" he was asked.

"Well, one night I came home very hungry and thirsty, and sleepy besides. I thought I would not stop to eat supper, but went to the pantry and drank a quantity of milk. I was so thirsty and the milk tasted so good that I kept on until I had drunk as much as three pints. I went to bed and to sleep, but about three o'clock in the morning I awoke, feeling startled and smothered as if I were choking. I put my thumb and finger down into my throat and felt somethink sticking in it. I got hold of it and pulled out three yards of milk."

This man had neglected to chew the milk, and the consequence was it formed one large, hard curd at once, which his stomach refused to digest.

One must believe that three yards of milk is what Mark Twain would call an exaggeration, but it is true that milk drinking is followed as a rule by slow and difficult digestion.

Dr. Lawson Tait told about a patient of his, a boy who was convalescing from typhoid fever and was acquiring a great appetite. One day he drank about a quart of milk, and not long afterward the doctor was called to examine this boy for what seemed to be an obstruction of the bowels. He found a great lump on the right side, and on opening up the abdomen he discovered it was simply a great mass of curds that had accumulated at that point, effectually blocking up the bowels. At first he thought it would be necessary to open the intestine, but on second thought he proceeded to break up the lump with his hands, and push it along little by little, until he finally succeeded in working it through into the bowel, and thus saved the boy's life.

All this goes to show that if you drink milk you should drink it in sips and allow the saliva to act upon it before it goes to the stomach so that it may not form a hard and indigestible curd. Dr. Lynde, an old and popular physician of 25 years ago, used always to instruct his patients to take milk with a teaspoon.

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### MODERN CULTS.

In days of old the cure was gold
  For him who tippled like the deuce;
Now science-while-you-wait prescribes
  Some orange juice.
In days of yore the Little Door
  For him who courted opium dreams;
But now the wretch may free himself
  With chocolate creams.
Friend, are your brains in smoke ring chains?
  Art slave to Lady Nicotine?
You need but daily fletcherize
  A lima bean.
No more is dope our only hope,
  Or calomel the best of boons;
To set things right we merely need
  A dish of prunes.
In days of old, when drugs were sold,
  They never dreamed such things could be;
Think you these modern cures are bunk?
  Odd. So do we.

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# THE DOCTOR HIMSELF.

## THE ROMANCE OF THE OLD ACCOUNT BOOK.

WE wonder if any of our readers have ever indulged in a reminiscent perusal of the old ledger containing the accounts of their first practice. We have been romancing a good deal ourselves today. Sunday is, nowadays, a day of more or less leisure with us—it didn't use to be in those old times—and on this particular Sunday, in turning over some old archives, buried away in our study drawer, we came upon the dingy, ink-stained, ear-marked ledger in which we kept the accounts of our first practice; and straightway we became reminiscent and contemplative. It was a country practice, as one's first practice so often is, and every patient's name—nay, every separate item of charge in each account—is invested with a distinctly personal history, an intimate memory, quite beyond its mere professional record, and brings up in our mind a whole train of circumstances vividly connected with the case.

There, on the front page, stands the name of the first patient we ever had! The scrupulous care with which it is inscribed and tallied bears eloquent witness to the pardonable pride with which this first-fruit of our professional career was recorded. But the virgin blush has faded from the page, and we can scarcely believe that this poor, modest, faded little entry is the same that once stood out so large and bold from the page. One reflection that retains its undimmed lustre in connection with this our maiden case is, that the patient got well. Yes, indeed, he did! And another is, that the bill was paid. Yes, indeed, it was! How long this entry held its solitary distinction in the ledger, we decline to say. No need now to rake over harrowing experiences. Enough at this time to recall that other accounts did eventually come to keep it in countenance.

Quite as vivid in its recollection, but marked with anything but pride or complacence, is this entry of the first patient whom we sent to the hospital for surgical operation, and who died there. A young man, with a malignant growth of the pylorus—a hopeless enough case, in all conscience, yet the stigma of his death following the operation which we had advised and arranged for, weighed like an incubus upon our mind, even more heavily than it did upon our reputation (and those things do hurt a beginner, or did in those days), and as our eyes rest upon the written record, our ears hear again the measured tramp, tramp of the feet of those who bore his body from the midnight train, on its return from the city, to its village home, where, with uncomfortable, half-guilty expectancy, we awaited its coming in company with his old mother. Of course, we know better nowadays. Things don't hurt as they used to. But that early sense of responsibility—exaggerated though it was—did us no harm.

After all, though, the responsibility of this first fatality in our practice was, in a fashion, divided between us and the city surgeon who had performed the operation. It was a desperate fighting chance, and everyone took it with full knowledge of its desperateness. And, profound as was the impression which its fatal outcome made upon our youthful career, it did not affect us with anything like the personal pain and distress that this case, the very next in the book, of little Mary R— caused us. This little girl of five was stricken with tuberculous meningitis; and we were selected to do battle with the terrible invader. There were several standpoints from which this case affected us. For one thing, it was the first to bring to us the crushing

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sense of the impotence of medical science—an experience which, of course, comes to every man over and over again in his practice, but which is a severe shock to the young practitioner in the first flush of his recently-acquired knowledge. In addition, the dear little maid herself won her way into our heart long before the first week of her illness had elapsed. God knows, we did everything we could for her, and we fought desperately, fiercely, day and night, for her life. But when she finally slipped away—as, of course, she did—we felt the sting of our first defeat, and a heavy personal sorrow, that depressed us for a long time.

Turning along the pages, we come to an account that recalls an experience almost—not quite, nothing can be quite—as thrilling as our first case. Its thrill consisted in the fact that it represented the largest amount of money which up to that time we had ever received from a single case and in a single payment. And, strangely enough, it came from a poor quarter, which we had almost regarded as a charity case. We had attended the wife and child of a poor man, two or three miles in the country, through a seige of typhoid fever, happily pulling them both through, and had thought we would be lucky to have their gratitude and good will. But it turned out that the man was an old soldier, and we were advised that if we would make a certified bill in proper quarters we should receive payment from the Soldiers' Relief Association. Well do we remember how one bright winter morning, about breakfast-time—we had been married only a few months—the treasurer of this Association drove his cutter to our door, and calling us out in the snow, paid us the amount of the bill, $70 odd, in real money! It seemed to us then that it was more money than we ever remembered to have seen in one lot—and more than we could ever expect to earn at one time or place again.

But why did we just speak of having recently been married when this wind-fall dropped into our lap? Why—if not that we had already caught sight, on a neighboring page, of an entry that brought the smell of the orange-blossoms—only in this particular instance it was golden-rod—to our reminiscent sense. Turn the page. Here it is. Nothing in its prosaic, matter-of-fact record, of "So many visits, at so much," to suggest the romance that lurks in its unromantic figures. But behind those charged visits, who shall count the number of subsequent visits that were never recorded anywhere else than in our love-sick heart? For in that series of visits, we were the patient, and she was both physician and medicine for our stricken heart. And, in the end, the account bankrupted us, and we made an assignment of all of our earthly possessions, including ourself, for the benefit of our exacting creditor; our creditor became our partner; and the partnership continues, thank God, until this day, with some junior members added to the concern. All of which grew out of this commonplace-appearing account of one Miss C——, for attendance on account of a Eustachian abscess.

(To be continued.)

* * *

## THE "VISITING" DOCTOR.

The Hahnemannian Monthly refers to the experience which almost every physician has had, at some time or another, of attending patients who happen to have some particular friend in the medical profession. Said friend has usually been so frendly that it is with the greatest difficulty that he can restrain his love and anxiety for the patient by remaining away from the house longer than twelve or twenty-four hours. It is not long as a rule before he becomes a clandestine medical adviser and disrupter of sickroom organization. As the illnesses involved are usually either dangerous or lingering,

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the morale of the sick room and the peace of mind of patient and family are most important factors. The patient's welfare is, therefore, hazarded by his so-called friend.

It is not an easy matter to decide how to deal with the disorganizer. If a close relative, he certainly has some rights by family ties; even then, it is his duty to deport himself decently, and to do to others as he would have others do unto him. If he is not decent, it is to see how he can be made to become so, for the man who has not the instincts of a gentleman can never be made to act as one.

If he is permitted to continue his quasi-friendly visits, there is almost a dead certainty that the attending physician will be discharged ere long. If the latter requests him to cease calling because of his disorganizing influence, ill feeling is created in the family. If there were any certainty that he would act honestly and work for the good of the patient, the problem might be solved by bringing him into the case as one of the attendants or consultants. The situation at the best is a disagreeable one. Occasionally, the difficulty is brought about by the fussiness of relatives themselves, and the situation is as unpleasant to the "friendly doctor" as it is to others connected with the case.

Is it necessary that we point out to our readers the obverse side of this little diatribe, and warn them against the danger of themselves playing this disagreeable role? We hope not—we believe not. Yet we remember that every physician is but human, and there is always a temptation to such weakness. *Verb. sap. suff.*

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## PRACTICAL MEDICAL ETHICS.

Dr. G. H. Colt, in an address to the Aberdeen Medical Students' Association, gave utterance to the following sensible remarks on the subject of ethics in medical practice:

As practitioners there are certain things that you should know about, certain things that you should have acquired, and certain others that you should do, which the tabloid gentleman has never heard of. They were left out in the scheduled list of the attainments that he should possess.

In the first place, secrecy and no gossip. The fact that the patient is consulting you must on no account be known to anyone but the two of you without his consent. You must on no account give any information about any patient, rich or poor, either in hospital or in private practice, without consent.

Secondly, you should have a sincere manner totally devoid of pompousness, a manner which has been described as being easy and free without being free and easy.

Thirdly, you should know a good deal about the etiquette of your profession. Most of this knowledge is only an application of common sense and good manners, but still, there are certain special points that you should have inquired about, notably the proceeding at consultation. You should do as you would be done by, and never take the bread out of the mouth of another practitioner by underselling him. You should play a straight and honest game, and although I regret to say you will sometimes find that this course is not the one that pays best at the time—for we are all human—there is no doubt that it will do so in the long run. If you cannot cure your patient at least prevent him from falling into the hands of the quack, whose advertisements promise so much to all those who suffer from the things that everybody has got. As a local practitioner said the other day, "I think all medical men should have had a sporting education."

Fourthly, on the day you register your qualification you should join a society for medical defense. Self-defense is the first law of nature. Alone you

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are powerless against the attacks of sundry people, but united you are strong and powerful, for your knowledge is very great and has been acquired laboriously and at great cost. This last fact should always be with you, and it is occasionally useful, as, for instance, when a patient comes to you demanding an explanation of certain symptoms and talking glibly of them. He has read them up in one of the popular "Child's Guide to Knowledge" series, sold by the publishers for the purpose of taking the money. He wastes your time and gives you nothing for it, a proceeding which, if carried on too long, leads to the workhouse. You say to him, "How long can you spare me to tell you this?" He says, "How long do you require?" You say, "It took me five years to learn, and it will take at least that." He leaves shortly after.

Then, again, you must not be nervous in your practice. You are not likely to be. That you may be very nervous in the totally abnormal mental atmosphere of an examination is nothing. Everyone is, some more so than others, but when you come to practice, if you have succeeded in screwing sufficient time out of the system as you go through it, you will be dealing with matters of which you have already had practical experience, or, at any rate, you will be able to recall a somewhat similar case and you will find that you are really not nervous. For much the same reason things will not frighten you; indeed, sometimes the difficulty will be for you to get sufficiently excited to act quickly. The earthworm and the snail move so slowly, their parts are so intricate that if you have devoted much attention to them you may possibly still be pondering and thinking, and, indeed, you may be so polarized on them that the flash of the symptoms of angina across the patient's countenance will pass unobserved when you come to see it.

Again, you should among other things be able to draw up a will or to take a deposition and see that such is duly executed. Remember, above all things, that the dead cannot speak, and when the speculative insurance agent comes to see if he can avoid his obligation to the widow and children of the dead man, be very careful what you say as to the length of time the patient had been afflicted. In a case of doubt surely the dead should have the benefit of it.

The public are ignorant of medical matters, and it is a good thing that this is the case, because otherwise many of them would become hypochondriacal. The press, however, is teaching the public too much without at the same time warning them that they can never understand medical things without a five years' practical training. A few words in plain language from the patient's point of view will always be acceptable, and if you put the matter clearly you will not have any difficulty and will not be worried when things do not run a rapidly successful course. And never say that there is no risk in an operation, however simple. There is always a risk, but fortunately it is usually a small one. Most distressing incidents occur through neglect of this simple precaution.

Your profession should be taken seriously, though the humorous side of it will often appeal to you irresistibly. This serves to help you on your way and you will often need it. Another practitioner here remarked lately: "Three things are necessary for a successful practitioner; first, the patience of Job; secondly, the temper of an angel; and thirdly, the power to work miracles." So you see you are likely to need a little fun as well.

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## HONESTY IS THE BEST POLICY.

I have been charged, says Scudder in the *Eclectic Medical Journal* of 1891, with sermonizing, and some of our subscribers have thought that this should

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be left to the ministers.(?) But, bless your hearts, they are impractical folk, living up in the wind, trying to find angels, and shaping the earthly life by hopes of heaven or the fear of hell. To all of this I do not object, and bid them God-speed. But in medicine I prefer my experience, and I give it in the headline—"Honesty is the best policy." It is not in the Scripture, but it should be.

Honesty is a sterling quality, and applies to every act of this life, and probably of every other. For as we see it, everything in the universe has this quality, from our sun and moon to the last sun and planet in the universe, and only fails when we come to creatures that have wills of their own, and an ability to do for themselves. Policy is a low motive, but one of man's chief possessions, and the one that guides him in most actions. It is the individual well being that is continually looked after. Honesty does not consist in keeping your hands off your neighbor's property, keeping inside the law, and paying your debts, but applies to every act of life; and policy equally concerns all that a man does, and is, as well as getting his share of this world's goods.

Having defined the terms and cleared the way for the argument, we will see how "honesty is the best policy" in medicine.

To the student about to commence the study of medicine, I have said, and now repeat, "If you can make up your mind that honesty is the best policy in medicine, you will succeed. If you can not, you will be a fraud or a failure, and had better give your attention to something else."

A man commencing the study of medicine should realize that he proposes to deal with life and health, man's chief possessions. Honesty requires that he should fit himself to give the best service to his patrons; anything less than the best he can attain is dishonesty. I should rather a man would steal my money, fail to pay his debts to me, or do almost anything regarded as dishonest, rather than that he should take charge of my life and health with but the pretense of a good preparation for the work.

This is straight preaching, and every one can understand it. The student agrees to do this preparatory work; his study of anatomy is "honesty," so is that of physiology, chemistry, materia medica, practice, surgery, and obstetrics. He is under bond, as it were, to his parents, his preceptor, the college, and his future patrons, to do the work well. Here our text gives the reward—"The best policy"—the good things of the profession—come to those who do honest work.

Both students and physicians are under similar bond that they will be educated gentlemen, and leading men in the community for all good work, whether it be sanitary, educational, or moral. Here honesty is by far the best policy.

Coming now to the doctor in his work, our maxim applies itself continually. One promises to give good and faithful service. One promises that the sick shall have the *best* medicines, the *best* care, the *best* food, the *best* of everything looking to health. As the doctor redeems these promises comes success, credit and a larger and better patronage. One tacitly promises that he will be a free man, without prejudice against others, examining all things, and holding fast that which is good. I believe that here, also, "honesty is the best policy," even though the narrow and hide-bound sometimes have success.

In pharmacy the current opinion seems to have been that our text is a fraud and deception. Medicines have been made to sell, and the less value the larger the profit. Worthless stuff

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palmed off for good, inefficient medicines for those of value, secret and proprietary medicines for open and good pharmacy. I do not see what kind of instruction these people could have had, but I can assure them that "honesty is the best policy."

* * *

## AND THE CHILDREN.

By A. D. HARD, M. D., Marshall, Minn.

The common relation between the physician and the children with whom he comes in contact in the course of his professional duties is not right. It has been customary for ages to stimulate childish fears in regard to physicians; telling them that the doctor will "cut your ears off," or "will get you," and the resultant horror of the child's mind toward him has been the needless cause of much difficulty in conducting diagnostic examinations and administering treatment when the little ones are ill. One of the best qualities leading to success in the treatment of sick children is a natural manner which quickly wins the confidence and trustfulness of their minds, and puts them into a receptive condition toward the ministrations of the doctor. This faculty is largely a natural gift, based upon an appreciation of pleasure on the part of the physician in associating and dealing with children, but it admits of much improvement by cultivation. A shy little child of three that cries as soon as the physician enters the room, may be quickly won over to a trusting frame of mind by the use of a little tact on the part of the physician. The cheerful greeting to another child, a little delay in approaching the sick child until it can form an idea that hostility does not exist, a soothing manner of touch and voice, a quiet demeanor, and not too much haste, will nearly always satisfy the little patient that you are its friend and will do it no harm. One of the most valuable impressions that can be made upon a child's mind is personal sincerity. It is unfortunately quite customary to lie to children and insane people. Parents do not hesitate to tell a child that castor oil "tastes good," "this is sweet," and "a little water," in order to get into the child's mouth some vile tasting medicine. A sensitive child will not forget one such treatment in years to come. It will forever after distrust and disbelieve the person who has thus betrayed its trust. It is better to lie to an adult who can weigh the reasons therefor and forgive you, than to wantonly deceive the little trusting child. A broken promise to a child will destroy its confidence in the value of your word, and will set an example in deceit which it will have good reason to follow. Abruptness is the cause of much trouble in dealing with children. The child's mind does not act with the mental celerity of adult life, and correct or desirable conclusions are not obtained so quickly. Too much haste will fail to impress it correctly, and produce alarm instead.

Diverting the mind from an unpleasant consideration to one of amusing interest will often allay nervous fear until sympathetic relations can be established. A gentle pat or stroke on the wrist will prove a valuable adjunct to mental suggestion. A warm hand and a low voice tend to soothe a child trembling with undefined fear. All children are like most females, they yearn for a little evidence of love. The mother's affectionate caress makes the boy love his mother more than he loves his father, who is a little more inattentive to these little blossoms along the path of life.

I value the confidence of a little child far more than that of any adult friend. It is devoid of sinister motives, untarnished by earth's impurities, and refreshingly natural in its expressions.

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# REFRACTION.

## PRACTICAL INSTRUCTIONS.

### General Procedure.

SEAT the patient in a good light, as nearly as possible six meters from the distance type, using the type-line marked No. 6 as a standard of distance vision.

(N. B. It is not absolutely essential that this distance and type number be observed, as any distance beyond six meters renders the rays parallel. The type-line used as a standard must correspond with the distance, and if less than six meters allowance must be made for the accommodation that is in force in the patient's eye. But No. 6 at six meters is the generally used standard.)

If a good uniform natural light cannot be obtained, the test card should be illuminated from below with a good artificial light. Indeed, many operators prefer artificial light because of its greater uniformity and controlability.

### Separate Tests.

Test each eye separately, shutting the other out of vision meanwhile by means of the opaque black disc found in the trial case, or by means of a strong plus lens. Some operators prefer the latter because it induces relaxation of the eye under test. But, whatever is used, it is important that the untested eye be covered and not simply closed by the patient, because the act of closing the eye tends to interfere with accommodation and innervation of the other eye. It is customary to begin with the right eye.

Make a careful and systematic record of the findings in each test as proceeded with, designating the right eye as R. V. and the left as L. V.

### 1. Pin Hole Test.

Always begin with the pin-hole test. Instructing the patient to put on the trial spectacle frame, mount before the eye the black disc with the pin-hole in the center, which is in every trial case. This has the same effect on the eye as a cutting out light from a camera, permitting rays to enter only along its central axis, and should therefore improve the vision of a healthy eye.

If the pin-hole disc does not improve the vision, there is some physical trouble with the eye-ball, and an oculist must be consulted. If it improves the vision, the trouble complained of is an error of refraction and further tests should be proceeded with.

### 2. Prismatic Test.

If your test case contains a chromatic lens, the prismatic test may next be employed with each eye separately.

A white light is placed six meters from the patient, and the chromatic lens mounted before his eye.

If the patient sees a red rim around a central blue light, the eye is hypermetropic.

If he sees a blue rim around a central red light, the eye is myopic.

A screen is now placed before the light, with a round opening 6 mm. in diameter immediately in front of the flame, and if the two colors, blue and red, are seen as bars at right angles to each other, the eye is astigmatic.

### 3. Distance Type.

The distance type should now be employed, each eye being tested separately. The patient is directed to look at the type card and tell how far down he can read.

If at a distance of six meters he reads type No. 6, his vision is expressed by the fraction 6/6, and is either normal or hypermetropic.

Now mount a weak convex lens, say 0.50 or 0.75 D., before the eye, and if the vision is not blurred by it the eye is hypermetropic, and you may proceed to measure the hypermetropia by the methods before described.

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If a convex lens does injure the vision, the eye is probably normal and needs only rest and hygienic treatment. But no eye should be dismissed without other tests being made.

If at a distance of six meters he cannot read type No. 6, but can read, say No. 4, his vision is expressed by the fraction 4/6, and he is either myopic or astigmatic—perhaps both.

**Wheel Test.**

Now instruct the patient to look at the fan-wheel which is at the top of the type card, and ask him if all of the spokes of the wheel look equally black to him. If they do, but he is still unable to read No. 6 type at six meters, his error is simply myopia, and may be measured and corrected as described in a previous chapter.

If the spokes of the wheel appear unequally black to him—one intensely black and another quite faint—he has an astigmatism, and must be dealt with as laid down elsewhere.

**Convex Lens for Relaxation.**

If for any reason neither atropin nor any other drugs are available, a very satisfactory relaxation of accommodation can be obtained by mounting a convex lens before the eye. Usually a 1.50 D. or 2.00 D. is about right, but the necessary strength varies with the patient.

A sufficiently strong diopter should be used completely to paralyze accommodation. When this method is used, the dioptrism of the lens used must of course be added or subtracted from the result of the test, the same as in the case of atropin.

**Spectacles.**

It is highly important that the glasses themselves be properly fitted to the patient's eyes, and the refractionist himself should attend to this feature of the treatment. Tabulated instructions are usually found on the prescription blanks issued by optical firms for the proper measurement of the frames, and these should be fully and carefully followed out in prescribing the glasses.

From an optical standpoint the most important things to be observed are:

1. That the size of the lens is sufficient to cover the eye. Optician's prescription blanks usually designate this by a graded scale of sizes, represented by 0, 00, 000, etc.

2. That the center of the lens coincides exactly with the visual axis of the eye. This is insured by a proper measurement of the width between the two pupil centers. For distance vision the lenses should then be made to stand perpendicularly; for near vision they should converge in accordance with the visual axes.

3. In myopia and astigmatism the lens should not be further than 13 mm. from the eye. Hypermetropes, and especially presbyopes, may generally suit their own comfort and convenience in this respect.

4. In astigmatism it is of course essential that the lenses always maintain the angle at which they are prescribed. To insure this, it is always advisable that astigmatic patients wear bow-spectacles. However, there are now in the market very improved makes of eyeglasses that provide for this necessity, and these may be worn in selected cases. Care must be taken that they do not become bent and out of shape, for this spoils the tilt of the cylinder axis and defeats the purpose of the lens.

**Latent Hyperopia.**

It has already been seen that hypermetropes are obliged to use some of their accommodation for long distance vision. Hence there is always a certain amount of undetected hyperopia, called latent hypermetropia, which is made manifest only under atropin, when the ciliary muscle is completely relaxed, so that the results under atropin will be found to be about 1 D. more than without it. It is advisable to provide for about one-half of this latent hypermetropia in prescribing the glass. Hence

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if the tests have been made under atropin, about 0.50 should be deducted from the result in prescribing, and if made without atropin 0.50 should be added, in prescribing the glasses.

In hypermetropes, so long as No. 6 type can be read at six meters, the glasses need only be worn when near work is being done. If, however, even distant vision is defective, they should wear glasses to correct this. When hypermetropia is accompanied by strabismus (squint) full correction (latent and manifest) should be worn constantly.

Myopes whose myopia is of low degree may be given eye-glasses for use in distant vision, and be allowed to read and write without any glasses. In myopia of medium degree they should wear their full correction constantly.

To this general rule there are two exceptions:

A. Where the myopia is of high degree the concave glasses diminish the size of the retinal image so much that the patient brings the object close to his eye to make the image larger. In this case the purpose of the glasses defeats itself, and it is wiser to gradually accustom the patient to his correction until his acuteness of vision is sufficiently improved to stand full correction.

B. In cases of high myopia where the patient has got into the habit of converging in excess of his accommodation, full correction, while giving excellent distant vision, may cause him much pain when used for reading, and in this event he must be given full correction for distance and weaker glasses for reading, gradually increasing the strength of the latter until he can bear his full correction for both purposes.

In these cases we subtract from the full correction the lens whose focal length is the same as the distance at which he desires to read. Thus, suppose his full correction is —9 D., and he wishes reading glasses for a distance of 33 cm. A 3 D. lens has a focal length of 33 cm. (the focal lengths of the lenses are marked upon the trial cases) and we therefore subtract 3 D. from —9 D. and give him reading glasses of —6 D.

**Hygienic Treatment.**

Myopes should be carefully instructed in hygienic measures, even after correction. They should avoid long or strenuous convergence, and frequently rest the eye by looking into the distance. They should read and write in bold letters, with the paper at 33 cm. at least from the eye, and sedulously avoid the stooping posture when reading or writing, which induces congestion of the eye-ball and aggravates the myopia.

**Malignant Progressive Myopia.**

It should not be forgotten that myopia may be, and frequently is, a progressive and malignant condition, and upon signs of such progression or malignancy a competent oculist should be consulted without delay.

Astigmatic patients should wear their glasses constantly. If the astigmatism is associated with high degrees of hypermetropia or myopia, necessitating separate glasses for near and distant use, the full correction of the astigmatism should be put into both pairs of glasses.

The astigmatism is due, as already seen, to the irregular shape of the cornea, hence it does not change with accommodation or under any other conditions.

**Diminishing Effect of Concave Lenses.**

It should not be forgotten that convex glasses, by bringing forward the nodal point, enlarge the visual angle and so increase the size of the image, and concave glasses, by carrying back the nodal point, decrease the visual angle and so diminish the size of the image.

This should be explained to patients, especially those wearing concave glasses, who are apt to complain that they do not see clearly with them, whereas the truth is they do not see as largely with them.

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**Cardinal Points.**

Always have a good light, if possible behind the patient, in making the type tests.

Always test each eye separately, by each method, excluding the other eye meanwhile by the opaque disc.

Always begin with convex lenses. They relax the ciliary muscle.

Never be satisfied with one kind of test. Confirm it with other methods.

Always relax the eye, if possible, in a patient under 30.

Astigmatism in a young patient cannot be properly estimated without relaxation.

Look out for ciliary spasm. When the patient begins to get erratic in his replies—seeing first one thing and then another—stop testing and insist upon rest or use a convex lens.

Have a system and follow it out. Nothing weakens a patient's confidence and confuses the refractionist like aimless pottering.

Having carefully attended to the correction of the refraction, pay equally careful attention to the mechanical features of the glasses. They are of great importance, and often make just the difference between success and failure.

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**OH, DOCTOR, DOCTOR, DOCTOR.**

Nobody loves a doctor,
  Nobody cares for him,
We hate his pills and curse his bills
  And fear his aspect grim.
He's but a shameless fakir,
  A quack and fraud is he—
But when we're ill, in language shrill
  We send this C. Q. D.:

"Oh, doctor, doctor, doctor!
  Please come right over quick!
I've a terrible pain in my throbbing brain
  And I fear I'm awful sick.
Oh, doctor, doctor doctor!
  Hurry as fast as you can.
Please hear my cry—I'm about to die—
  And I want a doctor-man."

Nobody loves a doctor,
  He cures less than he kills,
For one he saves, a thousand graves
  With poison'd stiffs he fills.
He is a hardened sinner,
  A liar, knave and cheat,
Some day he'll die and then he'll fry,
  But meanwhile, we repeat:

"Oh, doctor, doctor, doctor!
  Pray hark to my distress,
My baby's crying and maybe dying,
  So please don't stop to dress—
Oh, doctor, doctor doctor!
  I've had an awful fright,
But 'twas a pin that scratched its skin
  So you can go—Good night."

Nobody loves a doctor,
  The world would better be
If all his clan, to the last man,
  Were sunk deep in the sea.
He's but a vain pretender,
  An addle-pated drone,
And yet some day we'll likely say
  These words into a 'phone:

"Oh, doctor, doctor, doctor!
  Please, doctor, I need you,
The stork is near—it's almost here—
  Oh, doc, what shall I do?
Oh, doctor, doctor doctor!
  Forgotten are your sins,
If you'll but hurry, I won't worry,
  Not even if it's twins."

—GLENN ROBERT GUERNSEY.

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**CENTIGRADE AND FAHRENHEIT.**

A correspondent of *The Lancet* offers the following new alternative method of converting degrees Centigrade into degrees Fahrenheit, which may be found easier to perform mentally as the figures can be more easily retained in the memory—viz., multiply by 2, deduct one-tenth of the product, and add 32. Example (*a*), 30° C.=86° F. Method: 30×2=60. 60—6=54. 54×32=86. Example (*b*), 37° C.=98.6° F. Method: 37×2=74. 74—7.4=66.6. 66.6+32=98.6. Example (c), 40° C.=104° F. Method: 40×2=80. 80—8=72. 72+32=104.

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# THE SICK ROOM.

## AFTER-CARE OF LAPAROTOMY PATIENTS.

RALPH WALDO, in the *International Journal of Surgery,* points out that the use of saline by the rectum immediately following laparotomy prevents in a large measure the thirst that the patient is apt to suffer for the next twenty-four hours of convalescence. Anything that you can do to establish reaction as soon as possible will lessen the liability to post-operative pneumonia. These patients are not allowed to suffer too much pain, and a rational amount of morphin, hypodermically, is given. Usually the first hypodermic—and morphin is not always necessary—is ¼ of a grain. After that, if the drug is indicated, it is seldom necessary to administer more than 1-6 grain at a time. These patients are allowed to drink freely of water, given in small amounts. The nurse is told to give the patient all the water she wants with a teaspoon. For the first twenty-four hours they receive nothing by the stomach but water. After that broth or strained soups are administered, at first in small quantities, and later, as toleration is established, in larger amounts at longer intervals. Usually at the end of the second day a cathartic is given, rather mild in character, so that the patient's bowels are moved by the third day. After this, if there are no digestive disturbances, or more strictly speaking, no vomiting, these patients are placed on a fairly generous diet of semi-solids; and if there is no temperature at the end of the fifth day, the diet is made quite liberal. It is a mistake to put into the alimentary canal a lot of food that is going to decompose and cause gas, which is usually the rule within the first twenty-four hours after a laparotomy. On the other hand, these patients should be given as much food as they can assimilate. It is an equally great mistake to starve them when they are hungry and able to take food.

## THE BLANKET SPLINT.

F. X. Koltes describes this improved appliance in the *U. S. Naval Medical Bulletin:* Depending on their thickness, two or three blankets are folded in such a way as to form a strip, the width of which corresponds to the length of the intended splint (if for fractured leg, the distance from 4 inches below the heel to 6 inches above the knee). The strip is rolled from both ends about pieces of broom handle which serve to give rigidity, the rolls meeting in the center and being of equal diameter. The apparatus is turned over, the rolls separated a little, allowing the intervening portion to sag, thus forming a kind of hammock. The splint is applied as follows: An assistant raises the limb (a leg in this case) to a considerable angle, while under it are laid transversely pieces of wide muslin bandage about four feet long. The splint is then placed on the strips, the injured member is laid on the hammock, and, depending on the diameter of the limb at the point of apposition, the rolls are separated or folded in as necessary, so that they may be everywhere firmly applied to the sides, and that the leg may everywhere rest on the hammock. While the surgeon holds the limb securely within the splint, the assistant brings the muslin strips around and ties them firmly in front, one below the heel, one below the knee, one above the ankle, and one above the knee, some cotton being inserted underneath for padding if necessary. The strip below the heel serves to keep the foot at proper flexion and it may be supplemented by a piece of cardboard. In cases in which the blankets are likely to become soiled with discharges, a piece of rubber sheeting may be employed.

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### WHEN SALINE INFUSIONS ARE DANGEROUS.

Bertelsman relates that Konig has twice seen death hastened by large intravenous infusions of saline solutions. He had previously strongly recommended them, and the present paper was written chiefly to meet the objections of Heineke and others to them. Heineke says that they are strongly contraindicated in peritonitis cases in which occur disturbances of circulation from paralysis of the vasomotor centres. In these cases the heart is deprived of blood because the greater part of the latter is retained in the relaxed abdominal vessels. Bertelsman believes that by filling up the whole system of bloodvessels a quantity can be introduced which will compensate for the relaxation of the abdominal vessels. The heart will thus be filled and after some time the circulation will return approximately to the normal. In this way favorable operative conditions will be produced. That this hope is justified he has proved many times. It has been shown that in peritonitis we do not have to deal with the bacterial contents of the blood, since surgical peritonitis, as a rule, is not a general infection. It is well known that saline solution impairs the bacterial properties of the blood, and that therefore it should not be employed in general infections. When there already exists weakness of the heart, one should proceed with more care. In severe pneumonias, since the bacteria are circulating in the blood, the disturbances of the circulation can best be combated by small quantities of saline solution with adrenalin added.

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### "GREEN DAYS" FOR THE DIABETIC.

Foster, in the *American Journal of the Medical Sciences,* advocates a "green" or vegetable day for diabetic patients, the object of which is to decrease the food ingest, chiefly the protein factor. This is demanded in some cases because the ability to utilize carbohydrate is so slight that not even that resulting from the breaking down of the protein molecule is not burned. A "vegetable" day is then an attempt to put completely at rest a certain function, and in making up the dietary for such a routine the less protein entering into the food the better; of course, all carbohydrates are excluded. The bulk of food taken, therefore, is fat, and as this is of necessity small, a vegetable day amounts to the starvation days advised by Naunyn, with a thin disguise. The vegetables that may be used in this diet are any of the green variety that contain little or no carbohydrate other than cellulose (Table B); of these spinach, celery, cabbage, beet-tops, and the salads serve best. These may be varied to suit the taste of the patient.

The vegetable day might be ordered as follows:

Breakfast: A cup of coffee, a teaspoonful of cream, 3 egg yolks, served as omelet, with tomatoes and parsley.

Luncheon: 1 cup of bouillon; asparagus with egg sauce.

4 P. M.: A cup of coffee or a glass of wine with 1 casoid biscuit.

Dinner: A cup of bouillon; 1 box of sardines;* spinach (boiled); 1 glass of wine or whisky.

Vegetable days are prone to increase markedly the formation of ketone bodies, and on this account, if the patient's urine shows the ferric chloride reaction before the diet is commenced, alkalies should be given during the vegetable day; 25 grams of a mixture of equal parts of sodium bicarbonate and citrate is usually sufficient. Vegetable days have their function in diminishing the sugar excretion, and in order completely to free the urine from sugar several vegetable days may be necessary.

When this is the case, however, a most careful urine analysis is necessary daily to determine the degree of acidosis. When severe grades of ketonuria are caused by these "green days" it is best to follow them with one day of oatmeal. The number of days of each variety of

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diet (that is, vegetable days, "green days" and carbohydrate days), is a matter which must be determined by experiment with each individual.

*The smoked Norwegian sardines are much more satisfactory than the other varieties on account of the flavor.

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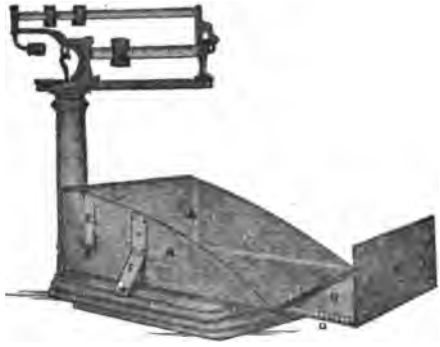
### WEIGHING AND MEASURING THE BABY.

Herrman, in *Archives of Pediatrics*, describes a scale pan similar to that devised by Variot, of Paris, with some slight modifications. Its construction is shown in the illustration. It is 10 inches wide, at the head 7 inches high, when closed 20 inches long, and when fully extended 32 inches long. The foot piece (C) is 4 inches high. It consists of two



parts, the main portion (A) attached by clamps (F) to the platform of the scale, so constructed that it can be readily detached. The foot piece (B) slides easily in and out, so that it can be accurately and quickly placed against the sole of the foot. At the head there is a chin strap (E) which is permanently attached at one end and hooks up at the other. Its length can be adjusted to the size of the infant. Its object is to prevent the head from moving from contact with the head piece; however, it is not indispensable; the child can be steadied by placing one hand on the chest and the other on the knees. The vertex is then in contact with the end of the pan and the soles of the feet with the foot piece. The weighing and measuring can be done in a minute, the latter accurately to within an eighth of an inch on the scale (D). As the increase in length is nearly an inch per month during the first six months, it is not difficult to determine the rate of growth.

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### FRUIT DIET.

At the recent Congress of Physicotherapy, Dr. Linossier, of Vichy, read an interesting paper on fruit cures. He did not share the enthusiasm of certain partisans of this method, but, on the other hand, he believed that it did not deserve to be treated with indifference, as it is capable of rendering good service in a large number of affections. The grape cure, for instance, is recommended in certain forms of dyspepsia, in constipation, chronic diarrhœa, congestion of the liver, infectious icterus, abdominal plethora, gout, gravel, and certain diseases of the skin of arthritic origin. The strawberry cure has been employed with benefit in gout and rheumatism. Lemons also are useful in some forms of rheumatism; however, they are counter-indicated in dyspepsia with an excess of HCl on account of their acidity.

In certain countries there exist special establishments for the fruit treatment, but in France they are not necessary, as in three-fourths of the territory it can be organized at home. Every physician, says Dr. Linossier, should employ the fruit treatment, as it is without danger, and withal agreeable.

The agents may not only be grapes, strawberries, lemons, but all sweet fruits —oranges, apples, pears, raspberries, etc.

In what way does fruit act? The mechanism is rather complex. In the first place, the fruits, although acid, render the blood alkaline, and their use constitutes an alkaline treatment. This paradoxical action arises from the fact that the tartrates, citrates, and malates of potassium, to which the fruit owes its acidity, are decomposed in the organism

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and transformed into alkaline carbonate of potash. In what does the alkaline cure by fruits differ from that by carbonate of soda or mineral water?

First, because the mechanism of the alkalization is not the same. Bicarbonate of soda, when ingested, provokes an abundant secretion of hydrochloric acid in the stomach. This acid comes from the decomposition of chloride of sodium in the blood, and it is by the extraction of this acid that the blood is rendered alkaline. In the case of fruits, the salts penetrate into the blood, are consumed, and transformed into carbonate of potash.

Secondly, the alkaline metal in mineral water is sodium, in the fruit potassium; as this latter fixes itself particularly on the cells of the organism and the former in the humours, it may be supposed that fruit renders alkaline the cells and mineral water the interstitial liquids.

The alkaline action of fruit is more energetic than commonly believed. Dr. Linossier calculates that a pound of strawberries equals one drachm of bicarbonate of soda, a pound of grapes, half a drachm, and the same amount of lemons, 50 grains.

Fruit is further diuretic probably by its sugar and salts of potash; it acts also as a laxative.

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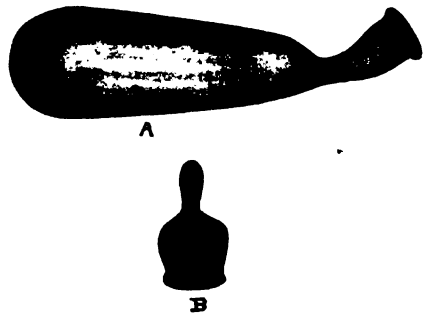
## SIMPLE APPARATUS FOR DRAWING BREAST MILK.

Chas. Herman, in *Archives of Pediatrics*, describes an apparatus devised by Dr. Siegfried Weiss, of Vienna. It consists of a glass flask about 8 inches long and 2 inches in diameter at its widest part, shaped as shown in the illustration (A). It has a capacity of about 6 ounces.

Before using the flask it is washed out carefully, filled with boiling water and quickly emptied. The edge is dipped for a few seconds in cold water so that it will not burn the skin when applied. The neck of the flask is then placed over the nipple and pressed against the skin. As soon as the flask begins to cool the nipple is sucked into the neck and milk flows in fine streams. In order to increase the rapidity of cooling and thereby the force of suction, a cold towel is wrapped around the flask. If the breast contains milk, 2 or 3 ounces can be obtained. The flask is removed slowly, so as to cause no pain. After using it is immediately washed and thoroughly cleansed with porcelain shot




and brush, and then boiled in soda. This is especially important when the flask is used as a feeding bottle. In order to use it in this way a special nipple (B) is placed over the neck and the flask given directly to the infant. I have used the apparatus for nearly a year and have found it in every way satisfactory. Its advantages are its simplicity and cleanliness. The suction force is greater than that obtained by the ordinary rubber bulb apparatus.

The principal uses are: drawing the breast milk for infants too weak, or for any reason unable, to draw it themselves. Frequently we have mothers in the maternity ward who have more than enough milk for their own baby, but object to putting a sick or atrophic baby to the breast. In such cases it can be drawn and utilized in the babies' ward, where it is indispensable. It is useful as a suction cup in cases of caking or beginning mastitis where the Bier treatment is indicated, and in women with retracted nipples to draw the milk and at the same time assist in making the nipples more prominent.

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### WINTER PRURITIS.

Many elderly people, remarks *The Healthy Home,* and persons whose skins are naturally hypersensitive, suffer greatly from burning, smarting, and tingling sensations of the skin in the winter season. The difficulty is likely to be worse in very cold, dry weather. There is no eruption unless the skin is irritated by scratching. Rubbing affords little or no relief, but only serves to aggravate the difficulty. The best relief will be found by the application of hot water—a very hot spray, or immersing the parts in water as hot as can be borne. An excellent method is the following:

Draw into a full bath-tub five or six inches of water, making the temperature 106 degrees. Sit down in this with the limbs extended. Rub the limbs and arms—the parts chiefly affected—taking care not to irritate the skin. After a minute step out of the bath, and raise the temperature to 110 degrees. Enter the bath again and repeat the rubbing as before for one minute. Then raise the temperature to 112 or 114 degrees, and continue the rubbing for another minute.

The effect of the bath may be continued by the application of a lotion consisting of

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| Carbolic acid | 2 parts |
| Rose water | 10 parts |
| Alcohol | 88 parts |

The lotion should be rubbed thoroughly on the affected parts and allowed to dry.

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### CANKER IN THE MOUTH.

Canker in the mouth is a local irritation resulting from disordered digestion. It is most quickly relieved by a good cathartic, as for instance a dose of salts or of seidlitz powders in sufficient quantity every morning for three or four mornings to remove the irritation. For local application a solution of goldthread made by steeping a teaspoonful of goldthread leaves in half a cup of hot water is very effective. Canker is sometimes caused by certain kinds of food; blueberries and strawberries often produce it in some people. It is also sometimes a symptom of syphilis. As a means of temporary relief from the pain and soreness one may cover the canker spot with a pinch of salt or swab it over with alcohol.

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ANCIENT, CURIOUS, AND FAMOUS WILLS. By Virgil M. Harris, Lecturer on Wills in the St. Louis University. 8vo. Cloth, 450 Pages. Boston: Little, Brown and Company. Price, $4.00.

The words which men desire to have read when they are gone shows their characters and idiosyncrasies in their true light; and they also reflect the manners and customs of the times when written, more accurately perhaps than any other documents. In this collection there are about five hundred wills which have been obtained from various parts of the world; they commence with the dawn of creation and close with that of Mary Baker G. Eddy; among others are those of the Patriarch Jacob, Virgil, Cæsar, Columbus, Izaak Walton, Voltaire, Paul Revere, Washington, Benedict Arnold, Thomas Jefferson, Napoleon, Alexander Hamilton, Dolly Madison, Aaron Burr, Brigham Young, Horace Greeley, Daniel Webster, Henry Clay, Stephen Girard, Jefferson Davis, Robert E. Lee, Mark Twain, and Florence Nightingale. As will be seen, many of these wills are the products of the master minds of the world. The vagaries of the human intellect are shown in a finely selected list of odd and curious wills, and the Testamentary Miscellany contains exceedingly attractive features. Such a work has never before been attempted in America, though in England and in France there are similar productions of high merit. The book is a distinct addition to legal literature, as well as a medium of precedent and aid to trust companies and all who have to do with wills, legacies, and the settlement of estates, and Mr. Harris is to be commended for his exhaustive research and labor.

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# MEDICAL PHARMACY.

## ARSENO-ORGANIC COMPOUNDS IN MEDICINE: AN HISTORICAL NOTE.

FRENCH medical men, as a rule, are not willing to accord Paul Ehrlich the recognition that is due him for his cautious and patient experimentation on the curative powers of organic-arsenic compounds in the treatment of syphilis, and French medical literature teems both with doubts expressed as to the value of "606" and with insinuations and open attacks on the integrity of the investigator himself. There may be some national feeling at the bottom of this. The memory of 1870-71 still rankles in the bosom of Frenchmen and causes in them a psychological refraction which prevents their apprehending in their true forms and proportions things in the land of their erstwhile enemy. Added to this is a certain intensity of professional jealousy at the success of a rival, for it is well known that a certain school of French pathologists have for a number of years been engaged in investigations into the therapeutic properties of organic-arsenic preparations as they are manifested in the treatment of syphilis and kindred affections.

The well-known and deservedly renowned Armand Gautier has not been able to escape this contagion of ill-will. In a recent meeting of the Academy of Medicine of Paris he made an indirect attack upon Ehrlich by seeking to dispute any claims to originality in arseno-therapy which might be made for him; and after an appeal to the sympathy of his audience in the words *à chacun son droit,* he asserted that the first to prove that, when brought into combination with certain organic radicles, arsenic can be deprived of its intensely poisonous properties—in a great measure at least—without at the same time losing its therapeutic value, was he, Armand Gautier himself. This proof, he declared, was published by him from 1899 to 1902 in connection with his researches on a number of arsenic preparations, particularly cacodylic acid.

This claim is challenged by a correspondent, signing himself *Zeno,* of the *Pharmazeutische Zeitung,* of Berlin, who contributes an interesting historical sketch on the subject of arseno-therapy, in which he shows that knowledge of the relative non-toxic nature of certain organic arsenic compounds existed as far back as the days of Bunsen. It may be noted that the first compound of the kind ever obtained was prepared by the French chemist Cadet, about 1760, by distilling arsenic trioxide with potassium acetate. It was a liquid with an extremely disagreeable odor, fuming in the air, and, on account of this latter property, called "the fuming liquor of Cadet." When Bunsen, in 1837, began his investigations on organic compounds, chiefly with the object of testing the radicle theory, which had already been given a firm support by the classic researches of Liebig and Wohler on benzoic aldehyde, his interest was strongly excited by the organic arsenic compounds; and he made this investigation a subject peculiarly his own, with the result of clearing up the mystery of their constitution. It is not within the scope of this article even to recapitulate Bunsen's researches or to dwell upon the far-reaching influence which they exerted upon the development of organic chemistry. Suffice it to say that he proved Cadet's liquid to consist for the greater part of a mixture of two compounds, which he called *cacodyl* and *cacodylic acid,* respectively, in which arsenic was combined with methyl groups. Both compounds could be converted by the proper oxidizing agents into cacodylic acid, in which the arsenic occupied the same position in the radicle as it did in the compounds from which the acid was derived.

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Bunsen did not confine himself to the chemical investigation of these substances, but also tested a number of them pharmacologically. He experimented on frogs, and the results convinced him that cacodylic acid was practically non-poisonous, even in large doses, a conclusion which was confirmed later by Kürschner. The last named investigator stated that rabbits could be given 0.36 gram *per os* without suffering inconvenience; indeed, they tolerated as much as 0.42 gram injected intravenously. Even a dose of 0.25 gram injected into the lungs produced no symptoms of poisoning.

Pharmacological investigations on cacodylic acid were carried on further by Schmidt and Chomse, in 1860. They again demonstrated the non-toxic nature of the compound and at the same time brought to light the fact that under certain conditions cacodylic acid is reduced in the stomach, followed by an irritation of the mucous membrane in consequence of the cacodylic oxide formed. In 1867 Lebahn published a pamphlet embodying similar conclusions, and further confirmation was furnished by the work of Schulz, published in 1879, and by the reports of Rabuteau (1882) and of Marshall and Green (1886). It is, therefore, an established fact that down to the year 1886 no less than nine investigators had anticipated the conclusions regarding the pharmacological properties of organic arsenic derivatives which Gautier did not announce until 1899-1902. And more: as early as 1865 Dr. Jochheim published a series of reports in which he gave the results that he had obtained during a number of years' use of cacodylic acid in the treatment of various chronic skin diseases and phthisis. In the same year, Renz administered the acid intravenously for the first time.

When, therefore, Gautier first published the results of his experience with cacodylic acid there was already in existence a rather extensive literature on the subject. That Gautier first pointed out the value of the compound in syphilis *Zeno* will not deny, for in Jochheim's reports, that disease is not mentioned. Whether he meant to include it with "chronic skin diseases" is beyond all conjecture.

And hence, if the maxim *à chacun son droit* is to hold, it is to Bunsen that the credit must be given of having first recognized the fact that the poisonous properties of arsenic can be, in a great measure, diminished or altogether destroyed, by bringing it into combination with certain organic radicles; and to Jochheim must be accorded the honor of having been the first to use it with definite results in medical practice.

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## INTERESTING PRESCRIPTIONS.

Harold Wyatt, in the *Pharmaceutical Journal,* discusses a number of prescriptions from among which the following are abstracted: Potassium iodid, sodium nitrite, spirit of nitroglycerin, sodium benzoate, syrup of ginger and water, darkened in color because of liberation of nitrous acid. By adding enough sodium bicarbonate to keep the liquid alkaline, no coloration was produced.

He calls attention to the value of senega as an emulsifier, citing a prescription calling for paraldehyd, syrup, tincture of orange, solution of senega B. P. and water as making a satisfactory thin emulsion, much easier to take than a gum emulsion. Likewise a prescription calling for 15 minims of chloroform in a four ounce mixture, emulsionized easily by shaking with a dram of solution of senega before adding to the other ingredients.

A prescription calling for fluid extract of cinchona, compound infusion of gentian and gold chlorid gives a fair looking mixture with a bulky precipitate if the gold salt in solution be added to the other ingredients last.

Likewise a mixture of sodium salicylate, potassium bicarbonate, ammoniated

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tincture of guaiac, emulsion of petroleum and chloroform water can be made sightly by making a saturated solution of the salicylate in the chloroform water, gradually adding the tincture of guaiac to this liquid, pouring the mixture into the emulsion with stirring, and lastly, adding the bicarbonate dissolved in the rest of the chloroform water. This is because a saturated solution of sodium salicylate dissolves the resin of guaiac. A call for a catheter oil containing four grains silver nitrate to the fluid ounce was filled by dissolving the silver salt in one and one-half drams of alcohol and adding this solution to castor oil; it being one of the few fixed oils that are miscible with alcohol.

An eye ointment calling for yellow mercuric oxid, cocain hydrochlorid, boric acid and vaselin was returned as very irritating. Deciding that the irritating action was due to formation of mercuric chlorid, the writer used the equivalent amount of the alkaloid cocain dissolved in castor oil and the resulting product proved entirely satisfactory.

Cachets calling for aspirin and potassium iodid liberated iodin and this in turn colored the starch of the cachet blue. The writer made a permanent product by drying the two chemicals, triturating each separately with a little butter of cocoa and packing the mixed powders lightly into the conceals.

A prescription calling for extract of aloes, pepsin, extract of nux vomica, phenol and extract of anthemis enough to make a mass, was found to yield a soft mass which when "filled" with an absorbent powder, made pills of unwieldly size. The difficulty was obviated by using powdered chamomile flowers instead of the extract, the powder proving an excellent absorbent.

Another soft pill was one calling for terpinol and sodium benzoate of each one and one-half grains. Ordinary vegetable absorbent powders proved useless, but the employment of a half grain each of Kieselguhr and hard soap to each pill made a satisfactory product.

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## PARAFFIN OIL.

*The Physicians' Drug News* thus describes the paraffin series: In organic chemistry, one of the series of compounds is termed the paraffins. All compounds of this series have the general formula CnH2+2, and are obtained by the destructive distillation of bituminous coals. At ordinary temperature, some of them are solids, others semi-solid and still others are liquids. Those which are liquids are commercially known as paraffin oils, and a mixture consisting of certain paraffin oils is official as liquid petrolatum, also known as liquid paraffin or paraffin oil.

Liquid petrolatum is a colorless or very slightly yellowish transparent oily liquid without odor or taste. It is lighter in weight than water, and is insoluble in this liquid. It is scarcely soluble in cold or hot alcohol, and readily soluble in ether, chloroform, carbon disulphide, oil of turpentine, benzine, benzene and fixed or volatile oils.

Liquid petrolatum is chiefly used in pharmacy as a vehicle for medical substances which are employed in the treatment of nasal diseases and intended to be applied by means of an atomizer. It is also frequently substituted for vegetable and animal oils in cold cream when so-called "greaseless cold cream" is desired.

Liquid petrolatum acts as a soothing local application in inflammation of the nose, throat, larynx, and even the bronchial tubes.

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## ECHINACEA AND THUJA OINTMENT.

Any physician, says *Ellingwood's Therapeutist,* can prepare a very useful ointment by taking a dram of echinacea, a dram of thuja, exposing the mixture to a very mild heat for a few moments to drive off the alcohol, and then combine it with vaseline or sterilized lard—about an ounce, in order to make an ointment

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for external applications to pimples, boils, cuts and especially to warts, and unhealthy appearance of the skin. The other ingredients may be added as seems to be indicated, but these main remedies should be introduced as of first importance.

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### OINTMENT BASES.

P. H. Utech, in the *Physicians' Drug News,* gives it as his experience that the operation of benzoinating lard has always been more or less unsatisfactory, due to the heat agglutinating the benzoin into a plastic mass. This difficulty may be overcome and a much more satisfactory product obtained if the benzoin be first coarsely comminuted and mixed with an equal quantity of anhydrous sodium sulphate, which prevents the formation of the gummy mass on heating. The finished product can be strained in the regular way.

An ointment base capable of absorbing large quantities of light oils such as olive oil, gualtheria, etc., can be made of equal parts of beeswax and lanolin. The proportion may be modified to meet different requirements. Used in the proportion suggested, as much as 50 per cent of methyl salicylate may be incorporated without liquefying the base.

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### IMPROVED AMMONIA LINIMENT.

An ammonia liniment possessing superior advantages to the one now official is made by mixing sesame oil, 75 parts; ammonia water, 25 parts. This preparation may be made instantaneously, is snow white, perfectly homogeneous, does not separate on long standing, and is less irritating than the U. S. P. preparation, because less alkalai is employed.

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### MAGNESIUM SULPHATE IN INFLAMMATION.

Magnesium sulphate solution, in the form of moist compresses, has been found to be an excellent local application in osteitis, acute rheumatism and other superficial inflammatory affections. A saturated solution of the salt is prepared, and in this are immersed fifteen to twenty layers of ordinary gauze. They are laid on the inflamed surface and covered with oiled silk or waxed paper. The compress must be kept moist during the time of its application, and the inflamed parts must not be washed during the treatment. Lucker, who describes the method in *l'Union Pharmaceutique,* states that the pain subsides at once, and the temperature quickly falls, becoming normal on the second day.

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### ETHYL CHLORIDE FOR WARTS.

Budinger, in *La Clinique,* recommends ethyl chloride for the removal of warts. A jet of the liquid is directed upon the wart for one minute and the operation is repeated every two days as long as necessary. A part of the wart thus treated falls off, while the remainder shrivels up and gradually disappears, leaving a red spot.

Superficial warts disappear readily under this treatment; with deeper ones the outer portion must be excised before applying the ethyl chloride.

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### PALATABLE MAGNESIUM SULPHATE.

A. G. Halderman, in the *Physicians' Drug News,* after trying several formulas, finds the following most satisfactory and make it as needed:

| | |
|---|---|
| Magnesium sulph | 1 av. oz. |
| Conc. sol. garantose (Merck's) | 1 fl. dr. |
| Oil mentha pip | 2 drops. |
| Oil anise | 2 drops. |
| Aqua, q. s. | 2 fl. oz. |

The concentrated solution garantose is made as follows:

| | |
|---|---|
| Garantose | 1 ounce. |
| Soda bicarb | ½ ounce. |
| Water | 1 quart. |

One ounce of this solution is equal, in sweetening power, to 1 pound of sugar.

The oils are perhaps best used in the form of spirits. The author uses them both ways. Of course, the solution must be filtered.

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# ELECTRO-THERAPY.

EDITED BY NOBLE M. EBERHART, A. M., M. D.
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## IONIZATION.

By J. L. BUNCH, M. D., D. Sc.
Physician for Diseases of the Skin, Queen's Hospital for Children, London, England.

A METHOD which has given excellent results in the treatment of localized skin diseases is that of ionization of ionic medication. Instead of introducing a drug into the general circulation and trusting that a minute portion of the dose administered will reach the diseased skin area, we can by this means introduce into each cell of this area such a quantity of the drug as we think advisable without affecting the surrounding healthy tissue. By means of an ordinary galvanic current the electrolytically dissociated ions of the drug are made to penetrate the tissue to a depth varying with the strength and duration of the current, the resistance of the tissues and the substance introduced. When we remember how great a resistance the skin offers to the absorption of many medicaments when they are applied to the surface in the form of lotions or ointments, it is obvious how great the advantages are of being able to overcome this resistance by a simple constant current without pain or evil after-effects. Certain local remedies are, of course, sufficiently diffusible to be absorbed however they are applied, but these are readily taken up into the general circulation and washed away, while others, such as those which coagulate albumin, do not make their way into the tissues at all unless forced in by ionization. One of the chief advantages of the method is that the *cells* are penetrated as well as the intercellular spaces, and are acted upon for an appreciable period of time by the ions before their diffusion into the fluid bathing the cells. Drugs can, of course, be introduced into or beneath the skin by intradermic or hypodermic injection, but by this means the fluid reaches the intercellular and lymph spaces and not directly the cells themselves.

In an ordinary aseptic surgical operation the necessary opening up of intercellular spaces and blood and lymph vessels does not matter, but in an already septic or infected area such a proceeding as scraping or curetting must incur the risk of spreading the infection and causing fresh metastases. The scraping of a tubercular skin abscess may be followed by general tuberculosis, and the curetting of a streptococcic or pneumonic focus may result in a general infection. By ionization, on the other hand, we can introduce aseptically into the infected area a drug which will not be diffused with any rapidity and will cause constriction of the vessels and disinfection of the tissues.

The electrolytic dissociation takes place either at the anode, connected with the positive pole of the battery, or at the kathode, connected with the negative pole, and, according to the substance which it is desired to introduce into the tissues, it is the anode or kathode which must be applied over the diseased area, the other electrode being in close contact with the skin in any convenient position.

At the anode are introduced the following substances (known as kations):

(1) Hydrogen ions of acids.

(2) Ions of metals, such as Zn, Cu, Mg, Na, and K.

(3) Ions of basic metals, such as $NH_4$.

(4) Ions of alkaloids, such as morphia and cocaine.

At the kathode are introduced the fol-

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lowing substances (known as anions):

(1) Acid radical ions, such as I, Br. Cl, SO4.

(2) Hydroxyl ions of alkalies.

Metals, therefore, and also alkaloids and hydrogen, are set free in the neighborhood of the anode and travel in the direction of the current from anode to kathode, while acid radicals and hydroxyl are set free round the kathode and travel in the reverse direction to the current from kathode to anode. The anode may be said to be the sedative pole and to produce a hæmostatic and drying effect on the surrounding area, while the kathode is the stimulant pole which causes dilatation of blood vessels and quickened absorption. When strong currents are employed the kathode causes electrolytic destruction of tissues, with the liberation of alkalies. It is, as before stated, important to determine at which pole the drug is to be introduced, and as an example of how important this is we may mention the unfortunate results which are sometimes seen in patients who have had superfluous hairs unskillfully removed by an incompetent operator—in Bond Street or elsewhere. An ordinary steel needle may be safely used for this work provided it is connected with the negative pole of the battery, but if it is connected with the positive pole, electrolytic dissociation takes place at the anode, and ions of iron are deposited in the hair follicles, which leave a definite tattoo mark considerably more unsightly and permanent than the original hairs.

The substances which are usually thus employed therapeutically are potassium iodide, iodine, sodium chloride, cocaine, lithium, mercury, zinc, magnesium, and copper salts. The salts must be soluble in water, but all substances which dissolve in water do not undergo ionization. Such are non-conductors, like glycerine, sugar, chloroform, alcohol, and ether.

The only apparatus necessary for ionization is a battery capable of driving a current of 35 to 40 milliampéres through the body, with a meter to measure the current and suitable electrodes. If a zinc salt is being used, we must use zinc electrodes; if a copper salt, copper electrodes; and so on. By interposing a rheostat, the current from the main can of course be used instead of a battery or accumulators. An electrode is taken of sufficient size to cover the skin lesion, and between it and the skin are interposed 6 to 10 layers of sterilized cotton lint soaked in a solution of the salt made up with distilled water. The neutral electrode must be large, and it is also covered with lint soaked in physiological saline solution, and I have found it most convenient to apply it to the patient's back. The current must be turned on very gradually and again diminished very slowly when the treatment is over. The strength of the current varies according to the drug which is being employed. Thus a patient can stand a current of 10 milliampéres per square centimetre for 15 minutes when a 10 per cent solution of cocaine is being used, and the resulting anæsthesia will be complete in about 10 minutes, but will probably be unable to stand a current of more than 3 milliampéres per square centimetre when a 2 per cent solution of zinc sulphate or copper sulphate is being employed. When cocaine is being used as a local anæsthesia it is well to add some adrenalin in the following proportions: Cocaine hydrochlor., 45 gr.; solution of adrenalin (1 in 1,000), 60 min.; sterilized water, 1 oz. The toxicity of various chemical compounds depends on the ionic grouping and on the powers of absorption of the organism. Thus strychnine will diffuse rapidly and cause death in a short time, whereas cocaine is not absorbed, and zinc causes coagulation of the albumin and cannot therefore be absorbed. But, other things being equal, the smaller the atomic weight the more rapidly the ion travels.

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## SECONDARY X-RAYS IN BREAST CANCER.

William Mitchell, M. B., in the *British Medical Journal,* asserts that, taking the general average of trustworthy reports, based on the three years' limit, amputation of the breasts, done by the most approved methods by the most noted surgeons, shows a rate of cure of about 40 per cent. If we were to extend the limit to five years it probably would not show 20 per cent of cure. In other words, in three years there are 60 per cent of recurrences, and in five years probably about 80 per cent or more of recurrences. Recognizing this fact and the limitations of the most careful surgical technique, many leading surgeons have the mammary regions of patients on whom amputation has been performed irradiated by *x* rays once a month or once in three weeks, for a considerable time after the amputation. There is good reason to believe that were this course universally adopted, the proportion of recurrences would be sensibly diminished, and the proportion of absolute cures greatly increased. At the recent meeting of the British Medical Association, Sir J. J. Thomson read a most interesting and suggestive paper, in which he dealt with the recent work of Professor C. G. Barkla, who had been able to show that when *x* rays of any ordinary type strike against a substance, metallic or otherwise, that substance gives off secondary rays of a special quality, and that the same substance struck always produces the same quality of rays.

In the *British Medical Journal,* November 12, 1910, Professor Barkla himself carries the subject a stage further, and states that elements of high atomic weight transform *x* rays which strike them into a secondary rediation much more absorbable and more intensely ionizing than the incident rays. These secondary radiations are, he states, of two sorts: *x* radation, which depends for its quality upon the characteristics of the particular element emitting it, and a *b* radation similar to the radiation of radio-active substances. He further states that the physiological effect upon the tissues, normal or pathological, depends upon the amount of the ionization of the tissues in question. Further, he states that if a tissue be injected with a heavy substance like bismuth carbonate, and then irradiated with an *x*-ray tube in the ordinary way, this substance (bismuth carbonate) will give off *x* rays of a constant quality, and that these secondary rays will produce a much greater and more intense ionization of the tissue, and hence greater physiological effect, than would have been produced by the irradiation had the bismuth carbonate not been injected. This brings to my mind a suggestion that might be useful to surgeons and radiologists alike—namely, why not, after amputation of the breast, impregnate the wound, before closing it, with sterilized carbonate of bismuth? This, if done not too profusely, would not in any way interfere with the healing of the wound. The bismuth then would become incorporated with the tissues at the very points where recurrence would be most likely, namely, along the lines of excision, and when healed, or even before, one would have all ready prepared the very condition which Professor Barkla says is the ideal one for further treatment by irradiation. If the views of Professor Barkla and Sir J. J. Thomson are correct, and all must agree that we must accept them as such, then this is well worth trying. It would obviate the necessity of painful injections later on, and give to *x*-ray treatment of such cases all the benefits to be derived from treatment by radium. Many years ago bismuth was used as a dusting powder for healing wounds, and quite recently the beneficial effects noticed after injecting sinuses with bismuth for diagnostic purposes must be within the experience of many; hence, there is no

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reason why this suggestion should not be carried out tentatively, at all events, and with probably beneficial results.

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### FARADISATION OF THE LARYNX.

Francis Hernaman Johnson, in *The Lancet,* states that a study of many cases has led him to form certain conclusions regarding the pathology and treatment of persistent post-catarrhal aphonia. Text-book accounts of chronic laryngitis and its accompanying disturbances of voice appear to me to err in regarding the disease as if it were on all fours with, say, a tracheitis. In other words, attention is concentrated on the mucous membrane to the neglect of other equally important structures. The larynx is primarily a mechanical device for the production of vocal sounds, and depends for its proper functioning even more upon the integrity of its muscles and nerves than upon the healthiness of their covering. In chronic catarrh of this organ the muscles become secondarily affected, and the delicate terminals of the motor nerves in all probability undergo an inflammatory degeneration. An acutely inflamed mucosa doubtless demands local sedative applications; and even when the trouble has become chronic, astringent sprays, paintings, etc., can often play an important part. But the tendency in many chronic cases is for the mucous engorgement to disappear to a great exent, whereas the damage to the neuro-muscular apparatus remains. Under such circumstances it is unreasonable to expect a cure by the ordinary means. On the other hand, improvement may be looked for from such measures of "natural therapy" as produce benefit in similar pathological conditions elsewhere—e. g., in that form of facial palsy which is the result of exposure to cold.

In treating paresis of laryngeal muscles by faradisation we are at a disadvantage as compared with the same conditions occurring in an arm or leg. We cannot single out the affected muscle or muscles for individual stimulation. This difficulty is not, however, insurmountable. The secret of success lies in the regular and persistent use of *mild currents,* which are not calculated to produce violent contractions of opposing healthy muscles. If carefully applied for a prolonged period this form of electricity exercises a selective action on the affected structures and eventually restores their tone.

Remarkable as are the results of faradism in suitable cases, we must not fall into the error of regarding it as a panacea for each and every form of catarrhal aphonia. Where the laryngoscope shows marked swelling and congestion of the cords and mucuous membrane must be attacked vigorously on orthodox lines, and here again we are likely to meet with little success if the naso-pharynx is in an unhealthy condition. Nevertheless, even where the mucosa is the part most at fault, the judicious use of the interrupted current forms a valuable adjunct to routine treatment.

In conclusion, it is perhaps desirable to urge the necessity, in any given case, of making sure that the aphonia has really resulted from such simple causes as catarrh, overstrain, or a combination of both. Thoracic aneurysm, lesions of the central nervous system, malignant growths, the ulceration of syphilis or of tubercle—these must always be borne in mind as sinister possibilities, and to waste time in faradising a patient who subsequently dies from cancer or is cured by iodide of potassium is to run the risk of being dubbed—not undeservedly—a quack.

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### H. T. CURRENTS IN ECZEMA EXUDANS.

G. M. Lowe, in *The Lancet,* states that, in common with many others, he has found mild currents (70 milliampéres) of great service in the treatment

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of chronic diseases of the skin, especially those where the constitutional condition of the patient indicates an irritable state of the trophic nerves, a condition so frequently met with in middle-aged women.

In the following cases, although great benefit followed the above application, their cure was not complete until the author used a preparation sold under the name of lana kerol, which is described by the makers as an oxidised di-phenyl compound, which is comparatively insoluble, and for this reason very much less toxic than phenol; the active di-phenyl compound is made miscible with water by means of a special soap, and this causes it to form a perfect emulsion with water. Its bactericidal qualities are highly vouched for by such observers as Dr. D. Sommerville and Mr. W. C. C. Pakes, and Professor R. T. Hewlett.

CASE 1.—The patient was a lady, aged 50 years, who had been suffering from eczema exudans for 20 years; the disease came on soon after the birth of her only son. She is a tall, spare, active woman, worn down with the constant irritation of the eruption which covered the face and almost every part of the body. She had, of course, used every remedy that had been suggested to her, and was unwilling to try anything further. The author found high-frequency currents and the effleuve very efficacious in relieving the irritation of the skin and in improving the general health. She was very careful to follow out the prescribed diet, and for a time a cure seemed probable; but as from time to time there was a return of the eruption in the axillæ and groin, he prescribed lana kerol 1 in 300 parts as a lotion, the diseased skin to be thoroughly washed with it every night and morning, the flexures to be dressed with unguentum rusci co., and the erythematous surfaces to be dusted with boric acid powder. The result was a complete cure, and there has been no return in 12 months.

CASE 2.—The patient was a lady, aged 60 years, very thin, but strong and energetic, who had been subject to eczema for over ten years. The skin is thin, dry, and irritable; the eruption affects chiefly the neck and scalp, as well as the axillæ, back, and flexures of the thighs. Change of air, high-frequency currents, and calamine applications effected a temporary cure last year, but the complaint returned in March, 1910. Her home is in an exposed locality on a clay soil. As she could not come for treatment, the author sent a capable nurse with instructions to cleanse every part of the skin night and morning with kerol solution (1 in 300) and then apply the unguentum rusci co. and boric acid powder as required. In three weeks the nurse returned reporting an absolute cure.

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## AVOID THE FLUOROSCOPE.

Sinclair Tousey, in the *American Journal of Physiologic Therapeutics,* cites Punch's famous "Advice to a young man about to get married: Don't," and declares that it applies most forcibly to the use of the fluoroscope. The evils thereof so far exceed its benefits that mankind would be greatly benefited by its complete abandonment. Infinite care is required to avail ourselves of its manifold uses without danger to ourselves and our patients and the use of the fluoroscope should be a rare exception, not as a complete examination but as a momentary glance in testing the quality and intensity of the radiance from a new tube or with a new exciting apparatus; or in determining the best position of the part to be radiographed in some difficult case. The danger lies in the longer exposure for making a diagnosis. The developed plate may be studied and discussed as long as necessary but a long examination of the fluoroscopic image means injury to the patient and if frequently performed involves the greatest danger to the

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operator. The use of the fluoroscope for examinations and for measuring the quality and intensity of the X-ray by the appearance of the bones in the operator's hand has been the death of several famous specialists. The manufacturers who have lost their health or their lives have been those who made a practice of allowing prospective purchasers to look through their chests and other parts of their bodies in demonstrating the apparatus. One manufacturer whom the author spoke with a few months before his death from cancer caused in this way, told me that it was impossible to sell the apparatus without subjecting himself to this certain death by torture. He was not merely running a risk, for that implies some chance of escape, and in this case destruction was a certainty. The theory was that if he told every physician who asked for such a demonstration that it was a dangerous thing, a certain number of possible purchasers might be scared off and send their X-ray work to some specialist. The manufacturers are making a great mistake. Some kind of a manikin could easily be used for fluoroscopic demonstrations and the physician would be the last person in the world to ask such a sacrifice of a fellow man if it were explained to him that while one transillumination would be safe a number of them every day would be fatal. It is like the bartender who is invited to take a drink. He can't drink with one customer without drinking with everybody and so he has to politely refuse everyone if he wants to keep sober.

* * *

## RATIONAL USE OF ELECTRICITY.

Tom A. Williams admonishes that electricity, like other remedies, should be used only with a clear object conformable with its physical properties. One of the most useful of these objects is the maintaining of life in muscles which would otherwise degenerate on account of injury or disease of peripheral motor neurones which supply them. Such are cases of poliomyelitis and of trauma of peripheral nerves. In each, of these the life of the muscles should be maintained by galvanism for perhaps a year, until it is ascertained what cells or fibres are definitely destroyed, and which of them can be restored to function. The author cannot speak from experience of the ability of galvanism to promote nutrition other than by the excitation of contractility; but many authorities believe that its intelligent application fosters regeneration of the tissues.

* * *

## TECHNIQUE OF $CO_2$ CRAYON.

Tousey's device, as described in *The Therapeutic Gazette,* consists in a hollow cylinder made by rolling several layers of blotting paper around a lead pencil or a glass vial, which is then removed. The blotting paper must be absorbent all the way through, not sized on one side like so many advertising blotters. One end of the tube thus formed is tightly stoppered. The other end is placed tightly against the nozzle of the liquid carbonic acid tank and wrapped around with adhesive plaster to make an air-tight joint.

The carbonic acid cylinder employed is a small one, 18 inches long and 4 inches in diameter, and containing five pounds of liquefied gas. It is laid on its side with the lateral nozzle turned downward. The liquid should be allowed to flow out into the porous paper tube. A portion immediately vaporizes and escapes through the meshes of the paper, producing cold enough to freeze the remainder. The liquid is allowed to flow very slowly, taking perhaps a minute to fill the tube. Turning it on full force would blow the tube off and waste a great deal of the liquid. When the mold is full of ice the liquid will begin to spurt out around the adhesive plaster, and the flow should then be turned off.

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# SOME DOCTORS OF FICTION.

By George Thomas Palmer, M. D.

## VI. LAURENCE STERNE. (1713—1768.)

### Doctor Slop.

WE HAVE wandered about among the various shelves of the old library, picking up, here and there, random volumes of more recent writings in which we had been assured we would find interesting and, at times, quite congenial doctors of fiction. We have now come again to the old walnut book-case, where the Judge's rarest and his favorite volumes have been stored for half a century. From the topmost shelf we have taken a volume encased in dark brown, polished leather, and the following title assures us that we have fallen among old friends:

The
LIFE AND OPINIONS
of
TRISTRAM SHANDY
Gentleman
Comprising
THE HUMEROUS ADVENTURES
of
UNCLE TOBY AND CORPORAL TRIM.
LONDON 1760.

Laurence Sterne, the creator of Tristram Shandy, was a minister of the gospel, holding two livings, one at Sutton and the other at Stillington, although, to be perfectly candid in our opinions of this distinguished cleric, the nature of his literary productions is not such that we of the present day would have suspected that they were written in a rectory. In fact, on first reading, one is impressed with Sterne's indefensible indecency and overstrained sentimentality; but, becoming more intimately acquainted with the peculiar style of the author, these repugnant features sink into insignificance and we are permitted to deeply enjoy the sparkling humor and exquisite literary style.

But we are not engaged in the business of literary criticism. It is enough for us to know that when "Tristram Shandy" appeared, "York was scandalized at its clergyman's indecency and indignant at his caricature of a local physician," and it is with this caricature and with this physician that we have to do on our present mission.

It seems that, when Tristram's father and mother were married there was a condition in the devise of the marriage portion, that at the time of each confinement, the mother should be supplied with funds wherewith she could go to London to be delivered. Through the foresight of Uncle Toby Shandy, however, who had had some slight experience with a widow, a proviso was inserted that, in case Madam Shandy should at any time go to London on a "false alarm," or should use her privilege to gain a trip to the metropolis, she should forfeit her right on the occasion of the next pregnancy, and should be delivered at home. It happened that, a year before Tristram was born, there had been an expedition to London on such a "false alarm" and, as a consequence, Tristram was born in the old country house.

In preparing for the arrival of the youngster, Madam Shandy determined that she would have none other wait upon her than an old midwife of the village; but her husband, to be prepared for all emergencies, and for various reasons of his

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own, engaged the services of the eminent Doctor Slop, a distinguished obstetrician, who seriously resented the appellation of "man midwife."

When the messenger from the Shandy household started posthaste to summon Doctor Slop, that worthy gentleman was on his way to call at the Shandy's, and the meeting of the messenger and the doctor on a sharp turn of a narrow lane resulted in the doctor's being suddenly thrown from his horse and being liberally bespattered with mud. The servant was mounted upon a fleet and massive coach horse while the doctor was "coming slowly along, foot by foot, waddling through the dirt, upon the vertebrae of a little diminutive pony, of a pretty color—but of strength, alack! scarce able to have made an amble of it, under such a fardel, had the roads been in an ambling condition."

Rescued from the mire, the servant lead the discomfited Doctor Slop to the library, where the father and Uncle Toby were smoking. Thus Sterne describes the obstetrician:

> "Imagine for yourself a little, squat, uncourtly figure of a Doctor Slop, of about four feet and a half perpendicular height, with a breadth of back, and a sesquipedality of belly, which might have done honor to a sergeant in the horse guards. Such were the outlines of Doctor Slop's figure; which—if you have read Hogarth's Analysis of Beauty, and if you have not, I wish you would, you must know, may as certainly be caricatured and conveyed to the mind by three strokes as three hundred.
>
> "He stood like Hamlet's ghost, motionless and speechless, for a full minute and a half at the parlor door, with all the majesty of mud; his hinder parts, upon which he had received his fall, totally besmeared; and in every other part of him, blotched over in such a manner with Obadiah's explosion, that you would sworn (without mental reservation) that every grain of it had taken effect."

But even after Doctor Slop had been thoroughly washed and cleaned and had been provided with fresh clothing, his troubles were found to have just begun. By the treaty which Shandy and his wife had reached in regard to her delivery, the midwife was to preside as long as all went well, and the doctor was to be held in reserve for emergencies, and further, not anticipating the immediate necessity for them, Doctor Slop had left his instruments at home. This predicament is pointed out in the characteristic style of Sterne, as follows:

> "'Truce; truce, good Dr. Slop! Stay thy obstetric hand; return it safe to thy bosom to keep it warm; little dost thou know what obstacles, little dost thou think what hidden causes, retard its operation. Hast thou, Dr. Slop, hast thou been instructed with the secret articles of the solemn treaty which has brought thee into this place? Art thou aware that at this instant a daughter of Lucina is put obstetrically over thy head? Alas! 'tis too true. Besides, great son of Pilumnus! what canst thou do? Thou hast come forth unarmed; thou hast left thy *tire-tete*, thy new-invented forceps, thy crochet, thy squirt, and all thy instruments of salvation and deliverance behind thee: by Heaven! at this moment they are hanging up in a green baize bag, betwixt thy two pistols, at the bed's head! Ring; call; send Obadiah upon the coach horse to bring them with all speed."

Hence, there was nothing for Doctor Slop to do but to seat himself before the fire with the two gentlemen of the house of Shandy, there to await a cry

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for help from the midwife, and to pray that such a cry would not be heard until Obadiah could return with the green bag.

As fanciful and erratic as the lietrary style of Sterne is, he had one notion about which he was very particular and conscientious. He insisted that, when his characters were awaiting anything to transpire, enough time must actually be occupied in the text to permit this thing to occur. Inasmuch as Obadiah had several miles to travel and over miserable roads, Mr. Sterne found it quite necessary to entertain his readers and to occupy the time of his characters awaiting in the library, for at least two goods hours. Mr. Sterne does not disguise the fact that, under such circumstances, time will drag a little. He had Corporal Trim read a sermon; he has Uncle Toby talk on his hobby, fortifications, but, what is more interesting to us, he permits Tristram's father to air his views on medical science and the advantages of being born feet foremost or by Caesarian section. Among other things, Mr. Shandy had conducted extensive investigations to ascertain the anatomical location of the soul, and he meditated in this wise:

> "Now, from the best accounts he had been able to get of this matter, he was satisfied it (the soul) could not be where Des Cartes had fixed it, upon the top of the pineal gland of the brain; which, as he philosophized, formed a cushion for her about the size of a marrow-pea; though, to speak the truth, as so many nerves did terminate all at that one place, 'twas no bad conjecture: and my father had fallen with that great philosopher plump into the center of the mistake, had it not been for my Uncle Toby, who rescued him out of it by a story he told of a Walloon officer at the battle of Landen, who had one part of his brain shot away by a musket ball, and another part of it taken out after by a French surgeon; and, after all, recovered, and did his duty very well without it. If death, said my father, reasoning with himself, is nothing but the separation of the soul from the body; and if it is true that people can walk about and do their business without brains, then certes the soul does not inhabit there.—Q. E. D. * * What, therefore, seemed the least liable to objections of any was, that the chief *sensorium,* or headquarters of the soul, and to which place all intelligences were referred, and from whence all her mandates were issued, was in, or near, the cerebellum, or rather somewhere about the medulla oblongata, wherein it was generally agreed by Dutch anatomists that all the minute nerves from all the organs of the seven senses concentrated, like streets and winding alleys, into a square * * * He maintained that, next to the due care to be taken in the act of propogation of each individual * * * was the preservation of this delicate and fine-spun web, from the havoc which was generally made in it by the violent compression and crush which the head was made to undergo, by the nonsensical method of bringing us into the world by that foremost."

Mr. Shandy had dipped into all kinds of books, and his theories had been much strengthened by reading *"Lithopaedus Senonesis de Portu Difficili,"* published by Adrianus Smelvgot, which, incidentally, he regarded the best thing that Lithopaedus ever wrote! From this classical work, Mr. Shandy had found: "that the lax and pliable state of a child's head in parturition, the bones of the cranium having no sutures (!) at that time, was such, that by force of the woman's efforts, which, in strong labor-pains, was equal, upon an average, to

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the weight of 470 pounds avoirdupois* acting perpendicularly upon it; it so happened that in forty-nine instances out of fifty, the said head was compressed and moulded into the shape of an oblong conical piece of dough, such as pastry cooks generally roll up, in order to make pie of."

> "'Good God!' cried my father, 'what havoc and destruction must this make in the infinitely fine and tender texture of the cerebellum! Or if there is such a juice as Borri pretends, is it not enough to make the clearest liquid in the world both feculent and mothery?'"

From his remarkable book, Mr. Shandy also learned that, when a child is born with head presenting, the cerebrum is pressed against the cerebellum, doing all manner of harm, while, when the child is born feet-foremost, the cerebellum presses against the cerebrum and does no harm at all.

> "'By heaven!' cried he, 'the world is in conspiracy to drive out what little wit God has given us, and the professors of the obstetric art are listed into the same conspiracy. What is it to me which end of my son comes foremost into the world, provided all goes right after, and his cerebellum escapes uncrushed?'
>
> "When my father was gone with this about a month, there was scarce a phenomenon of stupidity or of genius which he could not readily solve by it: it accounted for the eldest son being the greatest blockhead in the family."

Entirely wrapped up in his theories, Mr. Shandy went even further. His attention was directed to Caesarian section, in which, he argued, "there was no injury done to the sensorium; no pressure of the head against the pelvis; no propulsion of the cerebrum toward the cerebellum, either by the os pubic on this side, or the os coxygis on that." His enthusiasm on the subject led him to study the results of the operation and he was overjoyed to find that Julius Caesar, Hermes Trismegistus, Scipio Africanus, Manlius Torquatus and Edward the Sixth were all brought to life by this operative procedure.

Mr. Shandy brought all of these interesting details to the attention of Madam Shandy, and suggested Caesarian section for the delivery of her child, and was greatly distressed and disappointed when that worthy lady turned pale as ashes at the very mention of it. However, the philosopher was not without hope, and this was the real secret of the presence of the distinguished Dr. Slop at the birth of Tristram Shandy. The father secretly trusted that the midwife selected by his wife might find her efforts unavailing, so that Dr. Slop could be induced to follow a line of action which would save Tristram from stupidity.

By this time Obadiah had returned, but with him came new troubles for the accoucher. To avoid the jangling of the instruments together, thereby making it impossible for him to hear himself whistle, Obadiah had tied the strings in every conceivable way, making it quite impossible for Dr. Slop to get at his treasures. In attempting to cut the strings, the doctor cut only his thumb, whereup Sterne credits to him a complete chapter of profanity, the choicest collection, I will wager, ever accredited to any member of the medical profession in the whole field of literature.

At that moment, Susannah, the maid, appeared to announce to the Doctor: "My mistress is ready to faint—and her pains are gone—and the drops are done—and the bottle of julep is broken—and the nurse has cut her arm—and the child

* This statement of Sterne's is quoted as a matter of interest by the most recent text-books on obstetrics. Students of the subject have not reached a conclusion as to the amount of pressure exerted, varying from an estimate of 40 to 338.8 pounds. Edgar experimented for two years and reached no conclusion.

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is where it was, and the midwife has fallen backwards upon the edge of the fender, and bruised her hip as black as your hat. * * * But the midwife would gladly first give you an account how things are; so desires you would go up stairs and speak to her this moment."

Now this was in the year 1718; but the medical profession had already begun to stand firmly upon its dignity, and Dr. Slop was, very properly, one of the most dignified. On account of the fact that the Shandys were of very considerable prominence, and on account of the fact that he was to receive his fee whether he did anything or not, the doctor had taken the supremacy of the midwife with as good grace as possible; when the midwife had hung out her flag of distress, however, and had called for the doctor, that eminent gentleman resumed his old-time dignity. Although he was compelled to go up-stairs to see the patient, Dr. Slop came to a dead halt and said: "No! 'Twould be full as proper if the midwife came down to me!" And maintaining this stand for propriety and respect, the midwife came to him.

But while waiting for that crestfallen woman, Dr. Slop had produced his newly-invented obstetrical forceps, which he insisted upon demonstrating on Uncle Toby's hand.

> "'Upon my honor, sir, you have torn every bit of skin quite off the back of both my hands with your forceps,' cried my Uncle Toby, 'and you have crushed all my knuckles into the bargain with them to a jelly.'
>
> "'Tis your own fault,' said Dr. Slop, 'you should have clinched your two fists together into the form of a child's head, as I told you, and sat firm.'
>
> "'I did so,' answered my Uncle Toby.
>
> "'Then the points of my forceps have not been sufficiently arm'd, or the rivet wants closing, or else the cut on my thumb has made me a little awkward, or possibly——'
>
> "'Tis well,' quoth my father, interrupting the detail of possibilities, 'that the experiment was not first made upon my child's head-piece.'
>
> "'It would not have been a cherry-stone the worse,' answered Dr. Slop.
>
> "'I maintain it,' said my Uncle Toby, 'that it would have broke the cerebellum (unless, indeed, the skull had been as hard as granado) and turned it all into a perfect posset.'
>
> "'Pshaw!' replied Dr. Slop. 'A child's head is naturally as soft as the pap of an apple; the sutures give way; and besides, I could have extracted by the feet after.'
>
> "'I rather wish you would begin that way,' quoth my father.
>
> "'Pray, do,' added my Uncle Toby."

With this, Dr. Slop left the two gentlemen and was ushered upstairs to the room of his patient.

True to his literary creed, Sterne permits Dr. Slop ample time to do his work, and, to accomplish this end, he compels the two brothers Shandy to indulge in a great deal of unnecessary conversation, while the author himself took occasion to write an additional and wholly superfluous preface to the book. Sterne was nothing if not consistent in his literary beliefs; and he certainly was some things—Thackeray says, indecent.

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"'All is quiet and hush,' cried my father, 'at least above stairs: I hear not one foot stirring. Prithee, Trim, who's in the kitchen?'

"'There is no one soul in the kitchen,' answered Trim, making a low bow as he spoke, 'except Dr. Slop.'

"'Confusion!' cried my father, '* * * Why, I thought Dr. Slop had been above stairs with my wife; and so you said.'

"'He is busy, an' please your honor,' replied Trim, 'in making a bridge.'

"When Trim came in and told my father that Dr. Slop was in the kitchen, and busy in making a bridge, my Uncle Toby. * * * took it instantly for granted that Dr. Slop was making a model of the Marquis d'Hopital's bridge.

"''Tis very obliging in him,' quoth my Uncle Toby; 'Pray give my humble service to Dr. Slop, Trim, and tell him I thank him heartily.

"'This unfortunate draw-bridge of yours,' quoth my father——

"'God bless your honor,' cried Trim, 'Tis a bridge for master's nose. In bringing him into the world with his vile instruments, he has crushed his nose, Susannah says, as flat as a pancake on his face, and he is making a false bridge with a piece of cotton and a thin piece of whalebone out of Susannah's stays, to raise it up.'

"'Lead me, brother Toby,' cried my father, 'to my room this instant.'"

The crushing of Tristram's nose, in a process which doubtless caused pressure of the cerebrum upon the cerebellum, was a great blow to the infant's father; but from this he finally rallied. He had planned that the child be named Trismegistus, after Hermes Trismegistus, one of the heroes who had been delivered by Caesarian section before Caesar had himself, and in that the child should have a proper name, he consoled himself. But inasmuch as the child was in convulsions and "as black as your shoe," after Dr. Slop had finished with him, it was necessary to christen the little fellow at once, and Mr. Shandy was compelled to entrust Susannah with the message to the rector, giving the name. Between the parson and Susannah, they made it out that the name selected was "Tristram-gistus"; but this being quite unorthodox, and the parson's own name being Tristram, the child was christened "Tristram"—the one name which Mr. Shandy abominated above all others.

But, in following the early history of Tristram, we have neglected Dr. Slop. We regret, however, that this is done of necessity. This is the year 1909—it is not 1760. The further adventures of Dr. Slop scandalized all York a hundred and fifty years ago, and there was a mighty uproar that the local doctor should have been so outrageously caricatured. Thackeray, in speaking of "Tom Jones," tells us that, with our modern notions of modesty, the young ladies would scurry from the room when that famous volume is brought in, and the bookseller would be instructed never to send another such book—and there is no passage in "Tom Jones" which does not become a sweet murmuring of maidenly modesty compared with some of Sterne's descriptions of the later actions of Dr. Slop—and it is now some years since Thackeray wrote, and we are still affecting great virtue.

But we have met Dr. Slop and we have gone with him as far as we dare—together. If you would know more of him, I have told you that there is no longer a key to the Judge's old walnut book-case—the door swings invitingly ajar.

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# NOTES AND MISCELLANY.

### RED CROSS MONOGRAM.

The Red X Monogram, made by the Hickok Mfg. Co., 32 St. Paul St., Rochester, N. Y., is by far the handsomest emblem for the doctor's car that has been put on the market.

It is an artistic combination of red and gold. The circle surrounding the cross being highly polished brass, and the cross enameled a rich red. The monogram,

which is also of brass, is an original idea of the makers and adds a distinctiveness to the emblem. It is securely fastened to the cross.

The device stands six inches high and, placed on the doctor's car, secures the right of way in emergency cases, allows considerable latitude in the way of speed on such cases and always acts as a protection.

### TO GUARD AGAINST THE INROADS OF DISEASE.

An excellent way to guard against the inroads of disease is to feed to the tissues nutritious elements which, when incorporated within them add greatly to their powers of resistance. For generations Cod Liver Oil and the hypophosphites have been considered as leading "tissue-makers" and as combined in Cord. Ext. Ol. Morrhuae Comp. (Hagee), they have grown into still greater favor. Cordial of the Extract of Cod Liver Oil Compound (Hagee) charges the tissues with the very elements needed to resist disease processes, and for this reason it has held the profession's favor these many years.

### GUARANTY OF RESPONSIBILITY.

Gray's Glycerine Tonic Comp. is not a secret remedy. Its constituents are well known and it is probably one of the most substituted remedies on the market. This alone tells how valuable the profession have found the original Gray's Glycerine Tonic Comp. Useless remedies are never substituted.

But the original "Gray's" carries what its substitutes never do, the highest quality of every ingredient, a specific preparation of certain ingredients, and special processes in the final compounding, all of which contribute specifically to the character and uniformity of the finished product. Back of all this has been the pride, honor and reputation of its manufacturers. Can you doubt that they have had much at stake? Can you believe, as honorable business men of known standing, that they would allow the slightest concession in quality or method to jeopardize the efficiency of the product on which their success and reputation depended?

Certainly not, and the common business sense of the manufacturers of Gray's Glycerine Tonic Comp. to say nothing of their pride in its therapeutic worth have constituted the best possible guaranty against the slightest variation in quality or strength.

It is medical men who have realized the protection afforded by a product thus sponsored by a reliable firm—insisting on the original and allowing the use of no other—who have most frequently enjoyed gratifying reports from their patients.

### WHOOPING COUGH.

At this season of the year whooping cough and its distressing complications constantly confront you. Change of air, so essential a part in the treatment of

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the malady, is not always possible, and you have hitherto had to depend on the bromides, belladonna, veratrum viride, aconite and other depressants, all of which further help to lower the vitality of the patient.

In an acute specific infection of the respiratory tract as is presented in pertussis, one of the primary factors obviously to be sought for in the treatment in the malady is the administration of a remedy that will be an antiseptic to the mucous membrane of the respiratory tract, inhibiting and destroying the growth of the specific organism as well as preventing the growth of streptococci and pneumocci in the respiratory system. The remedy must also be a sedative, capable of being combined with other sedatives in the convulsive stage, and anti-catarrhal in action, to relieve the dry spasmodic cough, and later to liquefy the phlegm, render expectoration easier and diminish the tendency to emesis.

In the therapeutic action of Syrup Thiocol (Roche) all the desirable factors are present. It is an antiseptic to the whole respiratory tract, a sedative, and anti-catarrhal. Farna, Cautemin and Lacenay, in *Le Concours Medical* and the *Gazette des Hopiteaux*, have substantiated these claims. A. Thalou, in the latter publication, states: "The attacks are reduced in severity and number, the physical condition improves, and the catarrhal symptoms disappear." Pinet, in *Le Concours Medical*, states: "Thiocol considerably reduces the severity and duration of whooping cough. Its efficacy is greater than that of antipyrin, aconite, belladonna, benzoate of sodium, etc., producing neither intolerance nor toxic symptoms. By its anti-catarrhal and antiseptic qualities Thiocol exerts a most favorable influence on the mucous membrane of the respiratory tract."

The method of administration recommended is Syrup Thiocol (Roche) (from 1 to 5 teaspoonfuls) three or more times a day, with local disinfection of mouth, ears and nose, continued right through the period of decline. In the second or convulsive period, if the case be one of marked severity, the Thiocol may be combined with tincture belladonna and potassium bromide, the latter, however, being discontinued as soon as the period of decline is reached.

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## ACUTE NASAL CATARRH.

**By Elmer Sothoron, M. D., Washington,**

About six months ago a girl of 17 consulted me relative to an acute attack of nasal catarrh from which she had suffered for several weeks. As was my custom I sent her to the leading nose and throat specialists of this city.

After several weeks the girl returned to my office in company with her mother. She complained that her condition had grown steadily worse, that when she "blew her nose" there was considerable hemorrhage from the membranes. When I examined her nose I found both the anterior and posterior nasal passages inflamed and raw. The membranes were so badly swollen that the passage was completely closed up. I explained to the mother that in sending her daughter to the specialist I had done the best I knew how.

I had a sample bottle of Glyco-Thymoline on hand and knowing it to be a powerful deodorizing agent and the discharge from the girl's nose being so very offensive, I gave her the sample of Glyco-Thymoline, also a K. & O. Douche and instructed her to use a 50% solution in the nose four times daily but held out to her no hopes of a cure.

Within about two weeks the girl returned to my office and upon examining the nose I found the entire passage to be in a normal condition. Glyco-Thymoline had done the work unaided and beyond my most sanguine expectations. I expected a palliative treatment and a curative effect was obtained.

It is my belief, and cases subsequently to the one above cited bear me out in

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my contention, that in the early stages in the treatment of inflamed conditions of the nasal and post-nasal passages when there is marked congestion Glyco-Thymoline should be used in a 50% solution.

❖ ❖ ❖

### CONGESTED PORTAL CIRCULATION.

"Chionia acts purely as an hepatic stimulant, and produces a therapeutic action on the liver that cannot be produced by any other remedy in the Materia Medica—never causing nausea or nervous prostration, which so often follows efforts to remove the congested condition of the portal circulation by the severe hepatic remedies."

❖ ❖ ❖

### SENG.

"A therapeutic study of Seng indicates that it acts in a two-fold manner—first, by directly stimulating the glands of the stomach and intestines; and secondly, by imparting tonicity to the muscular coat of these structures. As a result of its administration the gastro-intestinal secretions are promptly augmented, and the mechanical functions generally described under the loose term, peristalsis, are re-established and reinforced. The digestion of food is substantially increased and fermentative processes due to lack of digestive fluids and general stagnation are promptly overcome. With a decrease of fermentation, the gastric irritation, pain, gas formation and consequent distension are rapidly controlled."

❖ ❖ ❖

**Anemia.—**

In ordinary cases, in which constipation is usually a prominent symptom, the following is one of the best prescriptions:

| | |
|---|---|
| Ferri Sulph | gr. xvj |
| Ac. Sulphur. Dil | m. xl |
| Liq. Strychninæ | m.xlviij |
| Magnes. Sulph | oz. i |
| Aquæ Chloroformi ad | oz. viij |

Two tablespoonfuls twice or three times a day an hour before meals.

### IMPROMPTU BLOOD SLIDES.

I never go anywhere, says Richard C. Cabot, without carrying a couple of pieces of glass in my pocket. Ordinary window glass will do, but microscope slides are more serviceable. The first thing to do is to thoroly wash the top of the ear and prick it. Never pierce the finger. The ear is the least sensitive and the finger the most sensitive part of the body. A drop of blood is then placed near one end of a glass slide and the other slide is used as a spreader and the drop is simply carried along as if you were spreading butter. You cannot do this wrong if you should try to. The glass slides are easy to carry and to clean and quite hard to break. They can be sent thru the mail and the blood slides will keep indefinitely unless there are flies around. In such case, they should be covered securely.

❖ ❖ ❖

### THE GOLD CURE.

Acute attacks of poverty
Quite undermine my health,
But I recuperate so fast
If only I have wealth.

I feel an itching in my palm,
My feet are getting cold;
I feel—I know I'm very sick—
I need a dose of gold.

For blues I like a good-sized dose—
It seems to work the best;
Apply the aurum to my hand,
And I will do the rest.

And for a broken heart—Dear me,
There's naught like golden balm
To ease the pain and dry the tears,
And leave life's pulses calm.

Small doses won't do any good—
I've tried them oft before;
Bestow on me famed Midas's touch,
And add ten billion more.

—Ella K. Dearborn.

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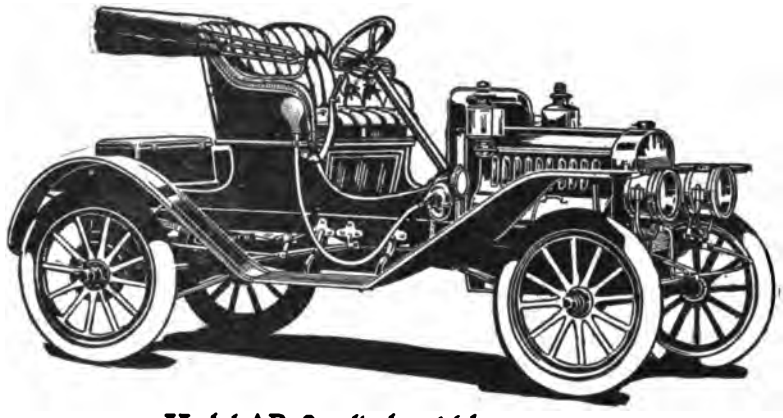
# WHAT 12,000 DOCTORS SAY MUST BE TRUE



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**These Books Free.** — We have told the physician's story from beginning to end in a booklet entitled, "How the Maxwell Increases the Incomes of Physicians." "How to Judge an Automobile," a practical treatise on automobiles, is a material aid in making your motor car investment. The Maxwell catalogue just off the press is complete in every particular. Write for the three books to-day. A postal will do. Just say "*Mail Books.*"

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Sold during Feb., '11, 1,392
Maxwells in use to-day, 42,665

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# HERE IS WHAT THEY SAY—
## THE FINAL ANALYSIS

My Maxwell is a jewel. I am 72 years of age and am able to keep ahead of some much younger physicians than myself.
R. B. Watson, M.D.,
Lock Haven, Mass.

One Maxwell will easily do the work of three horses with what it would cost with one horse.
Dr. J. H. Hall,
Norman Park, Ga.

I believe thoroughly in a Maxwell car. My neighbors and friends point to me as the one man in town who drives a car night and day on all kinds of roads and never has to tinker with it, and this is true.
Dr. G. I. Thacher,
Waterville, Kansas.

I haven't put in one cent's expense or one minute's trouble.
Dr. Perry Engle,
New Castle, Ind.

I do any kind of work that I formerly did with a horse and buggy with much more pleasure and speed than driving a creeping and panting horse.
Dr. J. F. Hines,
511½ E. Houston St.,
San Antonio, Tex.

Have run my Maxwell 10,000 miles or more without missing a day.
Dr. T. D. Lamasseney,
Beverly Farms, Mass.

I would not give my Maxwell for a "corral" full of horses and buggies. Dr. Geo. E. Robinson,
Provo, Utah.

My Maxwell costs me 15 cents a day to run. Dr. C. L. Wilson,
Ewing, Ind.

The upkeep has been nothing. It is alway ready to go and has given perfect satisfaction.
Dr. J. G. Barger,
Indianapolis, Ind.

I have driven my Maxwell 2920 miles at a cost of $51.37, which is .017 cents per mile.
Dr. E. R. DeLong,
Geigers Mills, Pa.

I certainly am enthusiastic over the Maxwell and can not praise sufficiently its durability and running qualities. Dr. F. T. Billings,
Pittsburg, Pa.

No physician can afford to be without a Maxwell,
Dr. G. M. Van Ausdall,
New London, Iowa.

I can do more work in much less time and at less expense than when I had a horse and buggy.
Dr. A. W. Hon,
Indianapolis, Ind.

I might use a Rooseveltian phrase "Delighted with it" and no less with the treatment received from your company.
Wm. Brimble-Comb, M.D.,
Carmi, Ill.

I do not believe that a horse and buggy can come anywhere near doing my work as the Maxwell has done it for me.
Dr. J. C. Wallace,
207 Creighton Ave.,
Fort Wayne, Ind.

It is improving every day in power and does far better than I expected. Dr. A. E. Sharp,
Bisbee, Ariz.

I have found that the use of the Maxwell is far more economical than any other means of transportation. Dr. R. C. Allen,
Lee Block, Manchester, Mass.

I have been able to do more work with much more ease. I do not see how the country doctor can do without a Maxwell.
Dr. B. G. Norris,
Celeste, Tex.

I have driven it over 2,000 miles at a total expense of 20 cents, outside of gas and oil.
Dr. W. McD. Halsey,
Ellisburg, N.Y.

Have had more pleasure and seen more country than with my horses in three years.
Dr. Geo. B. Richardson,
Allendale, N. J.

I have found that the use of the Maxwell is far more economical than any other means of transportation. Dr. R. C. Allen,
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I consider it the most reliable, serviceable and economical runabout on the market.
Dr. F. C. Walker,
Indianapolis, Ind.

I find great pleasure in the smooth running qualities, power and speed of your beautiful roadster.
Dr. J. P. Lewis,
Los Angeles, Cal.

It is the most economical and dependable machine I have ever seen. F. H. Nutting, M.D.,
103-107 Broad St.,
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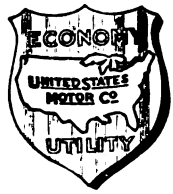



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### WOULDN'T LATHER.

A new Jersey farmer came to the city the other day and, among other things, he visited a high-class restaurant. His appetite ran to cheese, and, inquiring of the waiter what sort of cheese was listed, remarked that he desired "something new."

"Why don't you try a bit of roquefort?" suggested the waiter.

"What's that?" asked the farmer. "Hang it," he added, "bring me some. I like the name anyway."

He ate of it, and liked it. So he thought he would take some home to his wife. Arriving late, he laid the small cheese wrapped in silver paper on the sideboard.

He forgot to inquire about it till next night and then he asked his wife how she liked it.

"Oh, I s'pose it's mighty stylich up to the city, but I jes' kinder couldn't use it. I couldn't get no foam out of it, and when I washed the children they smelled kinder funny, and I can't say's I like it."

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### DIDN'T LIKE THE BRAND.

A prominent citizen of Washington was traveling over a line of railway with which he was unfamiliar. At a certain point the road passes a fertilizer factory, the odor from which is offensive. It is particularly disagreeable to a lady who is compelled to make the journey daily. As a protection from the obnoxious atmosphere she is accustomed to carry a bottle of lavender salts.

As the train approached the factory she produced the phial as usual, unstopped it and applied it to her nostrils. Presently the odor from the factory began to permeate the car. The Washington man endured it as long as he felt that he could. At last he rose to his feet and, approaching the lady, said, in his most polite manner:

"Madam, may I request you to replace the stopper in that bottle?"

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### INTUBATION OF APPARENTLY STILLBORN.

A correspondent of the *British Medical Journal* reports a rather unique method of dealing with apparently stillborn children.

When the usual methods of inducing respiration fail, he inserts a gum-elastic catheter, from which the blunt end, including the eyelet, has been cut off (a No. 8 is a convenient size), by the mouth, and using the forefinger of the other hand as a guide, pass it through the glottis into the larynx, and blow through it gently, but with sufficient force to fully inflate the lungs. Usually the respiratory muscles immediately respond and expel the air, and breathing commences. Occassionally several inflations are necessary before respiration is fully established. In one case, where not the slightest indication of heart action could be detected, it was necessary to compress the chest walls in order to expel the air, and the inflation and forcible expulsion had to be kept up for quite two minutes, but in the end the child breathed without help and lived. He has used this method for the last thirty-five years and never known it fail. As an example of the value of subordinating one's surroundings to one's need, the first time it occurred to the correspondent to try this (in or about 1875) the only thing in the house of the nature of a tube was a "churchwarden" clay pipe. Using about half of its stem, he was able, by exercising great care, to get the thin mouth-piece end through the glottis without injury to the soft parts, and got a perfectly satisfactory result. Since that he has always carried the catheter tube in his bag.

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# The Medical Brief

A MONTHLY JOURNAL OF PRACTICAL MEDICINE.

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## EDITORIALS.

### THE STATUS OF 606.

IN CERTAIN respects it is true that a considerable period of time must need elapse before any intelligent or trustworthy estimate can be arrived at of the precise place in therapeutics which Ehrlich's arsenobenzol, or "Salvarsan" as it has unfortunately (we think) been dubbed, is to occupy. Many points of both merit and demerit will unquestionably develop themselves in the course of our experience with the remedy, which have escaped even the shrewd calculation of its discoverer. We have hardly as yet learned the bare technique of its usage, to say nothing of the complex intricacies of its therapeutic and toxic effects. Already there is—as we predicted there would be—a significant modification of the ardent enthusiasm and unbounded credulity with which it was first hailed as a panacea for all the syphilitic ills that flesh is heir to; and we are beginning to realize that there are problems and uncertainties connected with its use which time and experience alone can settle. Yet it would seem as though there ought to be sufficient premises in our knowledge of the pathology of syphilis and of the pharmacodynamics of 606 upon which to base at least a general evaluation of the scope and limitations of the remedy.

We know, for instance, that the morbid constitution of syphilis, consists, like that of every other infectious disease, in two elements—a micro-organism, and the toxins elaborated in the body from the micro-organism. Of these, the micro-organism is, so to speak, the passive element—what we should call in physics the latent force. It is an essential element, without which, according to our present knowledge, there could be no syphilis; but of and by itself the spirocheta is not sufficient to bring about syphilitic lesions. In the absence of a suitable soil or favorable conditions it may, and frequently does, circulate in the blood without producing any manifestations of the disease; indeed, while the germ is in this quiescent state it is permissible to say that there is no disease, but only the potentialities of disease. The toxins are the active element—the kinetic energy—and are directly responsible for the syphilitic lesions. They are, as all toxins are, the joint product of the germ and the soil, and their presence in the blood indicates an active syphilitic process, which may or may not be manifesting itself in discernible organic lesions, but is nowadays amenable to detection by means of the Wasserman reaction test.

Now, so far as we are able to gather, the principle of arsenobenzol therapy is that it supersterilizes the blood against the syphilitic toxins, but has no influence whatever upon the spirochetae themselves. This is diagnostically exemplified in the fact that after its successful administration the Wasserman reaction becomes nega-

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tive, while, so far as we are aware, no change takes place in the microscopic exhibition of the spirochetate. And, as the toxins are directly responsible for the syphilitic lesions, it is easy to understand how a supersterilization of the blood by 606 is followed by a rapid clearing up of these lesions. Especially is its clearing influence seen in the earlier and more acute lesions of the primary and secondary stages of syphilis, for the obvious reason that in these earlier stages the toxins are more virulent in their action and proportionately more direct in their causative relation to the lesions. As the disease progresses, a certain degree of immunity is established in the body, and although the toxins may still be generating and circulating in the blood, so that the Wasserman test may still give a positive result, the lesions, if there be any, are more chronic and less proximately related to the toxins.

Upon these premises it is a comparatively simple matter, it seems to us, to predicate a general idea of the limitations of the arsenobenzol in the treatment of syphilis. In the first place, it can be expected to exercise no influence whatever upon those pathologic conditions which we call para-syphilitic, namely, those which owe their lesions, not to the direct activity of the syphilitic toxins, but to the weakened capacity for general resistance brought about by the long-continued combat with those toxins. And this deduction is borne out by the experience thus far had with the remedy. In general its administration has had no effect worth mentioning upon the para-syphilitic states, and Ehrlich himself expressly warned against its use in these conditions. Latterly, it is true, there have been some reports of improvement in this class of patient under 606; but these are readily attributable to the persistence, in these particular patients, of some slight traces of active toxic processes, and it is these that have been cleared up by the remedy, and not any part of the para-syphilitic disease. This lapping over of the syphilitic and the para-syphilitic processes also accounts for the numerous contradictory observations and findings encountered in the patients under the Wasserman test,—appearing and disappearing, and seeming to bear no uniform relation to the disease or its treatment.

In the second place—and this is a more important consideration—it is clear that arsenobenzol does not remove the essential underlying element of syphilis, namely, the micro-organism, but only supersterilizes the blood against its derivative toxins. We are not assured that it even inhibits the spirocheta from elaborating more toxins. So far as we know, the most successful administration of 606 leaves the spirochetae untouched in the blood. The permanence of the cure therefore depends upon whether the patient treated with the remedy has, at the time of treatment, acquired from his attack of syphilis a sufficient degree of natural immunity to insure him against all subsequent attempts of the spirochetae to reinfect him. Time alone can answer this question. But, if the premises be sound, the argument is incontestable that the earlier and more brilliant effects of the remedy are not so likely to be permanent as the less spectacular results obtained in later stages of the disease, because in the latter cases a more complete state of acquired immunity has been attained by the patient.

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## REFORM THE CORONER SYSTEM.

IN SPITE of all that has been said on the subject in various quarters, the crying demand for a reform of the coroner system throughout the country still persists, and nobody appears to think it worthy of serious consideration, far less of decisive action. What is everybody's business seems, as usual, to be nobody's business; and

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thus far no suggestions have reached our ears that any movement is contemplated, even, from any of the professions or from the public, looking toward a reform of the present pernicious state of affairs. Massachusetts still remains the solitary exponent of intelligent progress in this direction. In every other State in the Union the coroner's office seems to be hopelessly joined to its political idols.

That the present condition is a pernicious one needs only a most cursory knowledge of the facts to render it a self-evident proposition. Indeed, so far as we have seen, nobody has ever disputed it. The failure to realize it to the point of reformatory action has been altogether due to indifference and inertia. Yet it is a matter in which the public at large is most vitally at interest. Every day brings forth some fresh illustration of the injustices and inequities pertaining to the present slipshod system—or lack of system, rather—and no man in the community knows how soon he may be the victim of its vicious workings, or how severely he may be hit by the encounter. No one realizes the situation more keenly than the men who are entrusted with the administration of the coroner's office; and it is greatly to the credit of these men that they have not spared, but have cried aloud concerning its dangers and defects—but apparently to deaf ears.

Only the other day a case in point came under the direct observation of the write which made him wonder that the medical profession, at least, if not the public (who are proverbially slow to be aroused), did not rise up as one man and demand the abolishment of so obsolete and manifestly unjust a method of procedure. The case in question was a suit brought by a widow to recover insurance upon her husband's death. The insurance company fought the claim, and rested their case upon the post-mortem report of the coroner's physician, made a year ago. Every other feature of the evidence was favorable to the claimant, and indicated, beyond a doubt, at least in any medical man's mind, that death had been due to a pulmonary embolism immediately induced by the accident in question. But the report of the coroner's physician showed no such lesion—doubtless had never been looked for by the young and inexperienced man who, under the present political system, was at that time performing the coroner's work. The report did show the presence of a mitral insufficiency and slight myocarditis, which the medical witnesses were obliged to admit might account for the decedent's death. The defending company rested their case implicitly upon the coroner's report, which naturally carried official weight with the jury, and the claimant lost her insurance money, amounting to several thousand dollars.

Sometimes the matter works out a little more fortunately for the ends of justice —as in another damage suit which recently came within the writer's ken. In this instance a widow was suing a gas company for compensation for the death of her husband, who succumbed to the fumes of illuminating gas which escaped from a defective gas-pipe, the result of criminal negligence on the part of the company. Here, for some reason or other, the prosecuting counsel quite overlooked the report of the coroner's physician until almost the end of the trial. The case went overwhelmingly against the plaintiff, and a verdict for the defendant was practically a foregone conclusion, when a sudden inspiration of recollection moved the woman's counsel to unearth the coroner's report, and to subpoena the physician who made the post-mortem to the witness-stand. His testimony, and the filed report, completely turned the tide of justice, showing conclusively that the deceased had died of carbon monoxide poisoning, and won the widow her just compensation.

These are but two illustrative cases gleaned from a record of many hundred

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similar ones. We repeat, they occur every day. In one instance the outcome was disastrous to the manifest interests of justice; in the other it was happily advantageous. But disaster and advantage alike preach the same lesson. If there had been a proper legal procedure at the coroner's inquest, an embodiment of its findings in an authentic report, and a compulsory introduction of the coroner's proceedings as a routine part of the suit, whether civil or criminal, based upon the death of the decedent, then there would have been no miscarriage of justice in the one case, and no narrow escape from such a denouement in the other.

It is astonishing that such a glaring abuse should be permitted to continue in our medico-legal system without a sign of protest from those who suffer under it—or it would be astonishing, if we did not see the same indifference in other quarters. The public press can hardly be looked to in such a matter, since it is almost invariably bound up with political intrigues; and without the public press it is hard to get the ear of the people. The bar is the proper source of reform activity; but the bar has known of the abuse for many years and has not moved to abolish it, from which we must conclude that it is as indifferent as the public. It appears to be left to the medical profession to inaugurate a sentiment and a campaign which shall sweep away this nefarious mode of procedure. Let us take up the gauntlet thus thrown at us, and see the thing through.

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## THE TRAINED NURSE AND HER FEE.

WE HAVE been asked more than once to publish an article in this editorial department in the interests of the trained nurse. As this journal is devoted particularly to the medical practitioner, we have felt a little delicacy about meddling in any of the problems of the nursing fraternity, largely because we know so little about them; hence whatever we might have to say concerning the nurse and her work would necessarily be limited to an expression of our deep sense of their value and our admiration of their general efficiency. This expression we regard as almost superfluous. Yet we are glad to give it utterance; and if such an expression affords the wide sisterhood of nurses any slight gratification in their arduous tasks, or any inspiration in their noble avocation, we regret that we did not give it voice in this public fashion long ago.

Our profound appreciation of the value of the trained nurse, however, carries with it a correspondingly large conception of some obligations resting upon her, which she herself does not seem to have sufficiently appreciated, and which we trust we may be forgiven for pointing out. We regard the trained nurse no longer in the light of a luxury, but as a necessity. Modern medicine and surgery demand good nursing in the interests of both patient and doctor, and this is true in the case of the poor no less than the rich—perhaps more so, because the rich have an entourage and an environment which insures them intelligent care, while the poorer. and even middle class, public lack such facilities. And, in view of this imperative place which nursing holds in the sphere of medicine and surgery, it is, we think, a standing reflection upon the attitude and characterization of the nursing fraternity that it makes no provision for ministering to this numerous class of people at a charge within their reach.

Let us not be misunderstood. No one begrudges the trained nurse, who has dedicated her life and her substance to fitting herself for her work, all that she can earn, consistently with the conditions of the case, any more than one begrudges a

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physician a similar privilege. Indeed, we see no reason at all why she should limit her fee in the upward direction. The mistake, we think, is in fixing it immovably in the lower direction. The physician also regards himself as worthy of his hire, and almost all medical organizations nowadays establish a minimum charge schedule. But it is by no means a Medes and Persians affair. His work is, after all, an avocation, and his skill and time are ever at the service of the poorest patient, for a proportionately small fee, just as faithfully as they are rendered to the wealthiest for a princely compensation.

It is, as we understand, the earnest desire of the trained nurse to rank as a professional worker and to tread the path side by side with the physician. That being so, she must assume also the *noblesse oblige* of the medical profession, lay her talents at the feet of the world that needs them, and while properly demanding an adequate compensation worthy of the dignity and value of her service, she must gauge that value, not from a fixed table of figures, but by the ability of the patient to pay, and must not set her ministry above anybody's reach.

We believe this to be the phase of the trained nurse situation which at this time calls most loudly and urgently for adjustment. We do not believe that the nurses of the country desire their work and their organization to rank as a trades union. But if it is to be an avocation, then it must hasten to place its services on a basis where all can receive them. It must abandon its hard-and-fast scale of prices, and adopt an elastic schedule, in each direction, which will enable the nurse to earn a proper and adequate recompense without shutting the door of her ministrations to any that need them.

* * *

## The House-Surgeon

EXCEEDING tall, but built so well his height
Half disappears in flow of chest and limb;
Moustache and whisker trooper-like in trim;
Frank-faced, frank-eyed, frank-hearted; always bright
And always punctual—morning, noon, and night;
Bland as a Jesuit, sober as a hymn;
Humorous, and yet without a touch of whim;
Gentle and amiable, yet full of fight.
His piety, though fresh and true in strain,
Has not yet whitewashed up his common mood
To the dead blank of his particular schism.
Sweet, unaggressive, tolerant, most humane,
Wild artists like his kindly elderhood,
And cultivate his mild Philistinism.

—Henley.

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# The Value of Vibratory Massage.

By J. A. Burnett, M. D., Gans, Okla.

THE WRITER regards vibratory therapy as the scientific counterpart of hand massage and osteopathy. He cites several reports of experience with this form of treatment to demonstrate its value in cases where it is indicated. According to the sum of these reports it would seem that its field of greatest influence lies in the stimulation of metabolism and the sedation of nervous conditions. It appears to be especially useful in chronic troubles depending upon neurotic and metabolic disturbances, which have passed out of the reach of drug therapy. The writer warns against a "quack" employment of the treatment, and urges its more general adoption as an adjunct to regular medicine.

VIBRATORY therapy is a mechanical method of treatment that is now attracting much attention from many physicians. This method of treatment supplants hand massage and osteopathy, which is also nothing but a form or system of massage. Treatments can be given much quicker with a good vibrator than by hand and much more effective. In an article on the "Value of Vibratory Massage in Various Painful Affections," by Dr. Howard Demerest Eaton of Chihuahua, Mexico., (*American Journal of Clinical Medicine, Jan.*, 1911) he says:

"About three years ago I secured a portable vibrator and I can say that no other single article of my office equipment has been so profitable an investment and as a means of relieving pain and helping patients back to health and to their work. Whenever a patient comes into my office with a stiff neck, a sprained back or sprained muscle in any part of his body, with lumbago, sciatica or headache, I no longer prescribe a liniment or opiate, but I simply get right to work with my vibrator, knowing that the pain will disappear as if by magic within five minutes, and a person who comes into my office unable to turn his head or straighten his back will go out feeling as limber as the best and looking as surprised and happy as if he had just received news of a big legacy. Incidentally he will gladly hand me two or three dollars in place of the usual fee of one dollar for a piece of paper calling for some kind of liniment to be had at a drug store for another dollar. Of course, I very seldom fail to supply him with some medicine to flush his sewer and thereby clinch the cure so well begun."

Dr. Eaton further states:

"At the present writing I am treating a man who fell a distance of twenty feet in a mine shaft, landing on his hands and knees, but on whose back there fell a heavy board and a compressed-air drilling machine, so that it was a marvel that he escaped without a broken back or fracture of some sort. The twelfth dorsal vertebra was slightly displaced backward, but no symptoms of paralysis have made their appearance thus far, and I am not an osteopath. I have not ventured to push the vertebra back into place (I know an osteopath that caused a fracture of a dorsal vertebra in the case of a prominent business man here by placing his knee on the spinal column and pulling the patient forcibly back by the shoulders. Doctors here in El Paso diagnosed the condition as typhoid spine until an X-ray picture taken in Germany disclosed the fracture and then careful questioning

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elicited the story of the interference on the part of the osteopath, but which the patient had neglected to mention. But I am digressing.) Vibration along the spinal column of this my latest patient is producing the usual gratifying results. The pain disappeared after three treatments, while after the very first treatment the man was able to straighten up his back, stoop over and pick up his cane and finally walk off without using it.

"A doctor who is equipped with a good knowledge of anatomy—as all of us should be—and with a good vibrator —even if only a small portable one— can accomplish nearly everything that a professional masseur or an osteopath can do (and never do the harm the latter sometimes causes), but even if he or his patients should prefer manual manipulation, it may not be avilable, and in that case the vibrator proves a most acceptable substitute."

A physician must have a knowledge of the spinal nervous system in order to use a vibrator with any degree of success, and he must have an apparatus that is capable of doing good work. In order to treat the liver one must know the spinal nerves that supply the organ and would treat the seventh, eighth and ninth dorsal posterior nerve-roots, either one or all.

Dr. C. A. S. Sims says:

"In lumbago, myalgia, sciatica, pleurodynia, neurasthenia and in any of the chronic troubles, vibration works rapidly. If used in conjunction with the leucodescent ray, as I generally use it, it is prompt and effective. I have used it very effectively in gradual dilation of the sphincter ani—and by the way, a multitude of nervous conditions are dispelled every time a contracted and sphincter is relaxed. Many cases of chronic headaches I have cured by a course of vibratory treatments by sedating the cervical sympathetic plexus through vibration to the first four cervical nerves."

Dr. Sims further states: "The treatment of chronic troubles is the largest field that is open to the doctor and if you do not fit yourself to take care of them, your near neighbor, who is a bit more energetic than you are, will care for them and you are the loser in the game."

Dr. J. H. Carpenter says: "There are many forms of vibration used therapeutically and the results obtained depend upon the modality use. A great deal of the therapeutic value of electricity depends upon the extremely rapid vibration of the current with its stimulating effect upon metalbolism."

In regard to the selection of a vibrator and of books on this subject, I will quote from Dr. Fred H. Morse in his article, "Mechanical Vibration Therapy," June, 1905 *Journal of Advanced Therapeutics:*

"There are more than a score of vibratory machines on the market, some of them are capable of doing good work, while others only serve to a limited degree, and still others are mere playthings as far as any therapeutic value is concerned.

"There have been many valuable papers contributed to the subject of mechanical vibration therapy, but I have become acquainted with but two books upon the same—one by the late Maurice F. Pilgrim, M. D., and the other by M. L. H. Arnold Snow, M. D. Both are interesting and instructive works. Two large charts showing the nerve distribution, of which Dr. Arnold Snow is the author, I consider to be valuable aids to those using any type of vibratory apparatus."

Vibratory therapy has its contra-indications and can be improperly used as treating over an abscess in place of the lymphatics that drain the part, etc.

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# Some Diseases Which Precede Inebriety and Alcoholism.

By T. D. CROTHERS, M. D.
Superintendent Walnut Lodge Hospital, Hartford, Connecticut.

A BROAD consideration of the subject of alcoholism and inebriety calls for a study of all the sociologic and pathologic conditions which lead up to the indulgence of the drinking habit, and of the far-reaching consequences that spring from its indulgence. In this thoughtful article Dr. Crothers shows how the craving for liquor often results from the pathologic ravages of infectious diseases, like typhoid, developmental degenerations, exhausted states of the nervous system, and physical and mental traumatism. Syphilis he regards as a fruitful cause of the drink habit. He refers to the frequency with which the practice of taking alcoholic stimulants begins with the accession of middle age, with the idea of stimulating the mental and physical faculties which naturally begin to moderate their ardor about this time of life. Those who are interested in this subject of alcoholism—and who is not?—will find in Dr. Crothers' article a fund of suggestive data gathered out of his own ripe experience in dealing with such cases.

THE term inebriate is used to describe the periodic drinker, and one who at long intervals uses spirits, and who has distinct free intervals of sobriety, during which he recovers and appears to be about the same.

The alcoholic is usually one who uses spirits constantly, in some form or other, who is literally poisoned, and though not drunken or stupid in appearance, is suffering from toxaemias, due specifically to the steady use of spirits. He may at times be drunken, meaning by this word, delirious or comatose; but on recovery, continues the use of spirits as before. Such cases are alcoholics, irrespective of all other conditions.

Careful studies of persons, who came for treatment, suffering from these neuroses, show that a certain number are suffering from organic diseases, and that the use of spirits is both a symptom and a complicating factor of the present condition. One author thinks that 20% of all drink and drug neurotics are suffering from some disease. Many of them are very complicated cases, in which trauma and acute infectious diseases have preceded the present conditions. Others show a very large hereditary psychosis and degeneration, which are always to be considered, in the effort to determine, how far the anaesthesia of alcohol has been a factor, as an active or contributory cause.

Statistical studies have done but little more than indicate the prominence of neuroses and psychases preceding the drink craze. In an experience covering many years and several thousand cases, it would appear that more than half of all inebriate and alcoholic conditions are traceable to derangements that have existed before. A vast field of hereditary entailments, including a great variety of hypertrophies and retarded growths of both body and brain, appear in all studies. Degenerative conditions are fostered and developed through the faults and ignorance of parents in bad surroundings. Outside of these, there are a few diseases and diseased symptoms, that have preceded the drink craze, which a more accurate knowledge will recognize in the future and provide against.

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General paresis, one of these, is very significant in its slow growth and obscure symptoms. One author has pointed out, as a significant symptom, the radical changes in conduct and character, beginning years before the disease develops, and constituting a most obscure conflicting field of unexplainable symptoms. Thus a young man of modest demeanor, suddenly becomes bold and emotionally different, is assumptive where he was retiring before. This goes on, until he develops mild delusions of wealth and ambition and has aspirations for conditions that are clearly without reason. Formerly he deferred to the advice of others. Now it is ignored. A suspicious egotism is present, with faulty reasoning. Then he becomes a user of spirits and very soon pronounced symptoms of paresis begin.

Not unfrequently, unexplainable fits of anger precede and mark a change in the character and conduct. This grows rapidly. Then, unexpectedly, he becomes a spirit drinker and defends his career with great irritability, and after a time, paresis is diagnosed. Many cases of this character, only varying in the particular phases of mental changes, are noted. For instance, a quiet, apparently self-satisfied man suddenly develops great restlessness and discontent at his present condition and makes radical changes attended with loss. He develops apparent delusions and extravagant expectations for the future, changing his occupation, his mode of living, his religious or political faith, and is unusually buoyed up with expectations that never materialize. Later he drinks to excess and then finally paresis develops. Such cases are not uncommon in the business and social world. Often they are misjudged, and alcohol is put down as the active cause, when it is literally only a symptom.

Another class noted, is where trauma of some kind changes the manner of life and living as well as the character of the individual and with it appears a use of alcohol that is unexplainable to either the patient or his friends. The trauma may be a broken bone, a shock, a concussion, a heat stroke or something that makes a profound impression on the mentality of the person. Thereafter he is different. His previous quiet, uniform method of living is broken up. He is excited, restless, unsatisfied, becomes a speculator, or politician, uses spirits. Then a decided downfall begins.

Infectious diseases such as typhoid fever, dyphtheria, malaria and some of the exanthemaea are not unfrequently followed by these same changes which develop into a desire for spirits and into pronounced inebriety.

The patient appearing at an institution for the treatment of inebriates, with excessive egotism and confidence in his ability to abstain, is of this class. His explanations of his failure to abstain in the past and his delirious confidence in the present, are suspicious.

Such cases may be some form of toxaemic insanity, which will merge into melancholia or some other form of mental disease. Paresis should be recognized as a probable termination of conditions of this character. A symptom not well understood is always more or less prominent in all inebriates; namely, inability to recognize the injury resulting from the use of spirits. Like a paretic, there is increasing over-confidence in their mental and physical strength, and increasing doubts, as to the accuracy of persons who hold contrary views.

They seem to be unable to discriminate and to judge of their actual condition. They always attribute to themselves superior judgment and knowledge of their condition and of the judgment of others. There is associated with this a peculiar kind of exhaustion and fail-

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ure, manifest in little things. Thus the power of endurance is lessened. The patient cannot work as hard or as accurately. Whatever the business may be, he gives up sooner, ascribing this to various superficial causes. Not unfrequently he is a persistent patient, taking patent medicines, coming to the doctor's office with a positive diagnosis which he insists the doctor shall accept. Spirits at this time are very common and often concealed; or, if taken openly, defended with a strange unreasoning confidence.

A very active man exhibits changes in pride, personal appearance, accuracy of his words and conduct. Later he is found drinking and this condition become more pronounced. Later obscure symptoms of organic disease appear. The use of alcohol is not considered as very prominent, and perhaps it is not discontinued, only modified in form and extent. A diagnosis is made of some acute degeneration and the patient dies. Such cases are not uncommon. The influence of alcohol is never mentioned. While it is a symptom, it is really a very active contributing cause of organic changes, that might be checked, if it is withdrawn.

There is another organic condition, which precedes alcoholism, and should be recognized. It is syphilis. The degeneration from this poison is so obscure and so persistent, and is marked by both physical and psychical fatigue, which in the first instance may provoke the use of alcohol, because of its agreeable anaesthetic effects. When these pleasing effects are noted, a physiological craze is developed. Alcohol, in some form, seems to be the most fascinating of all drugs, and is taken with the greatest of avidity. If there is a predisposition inherited, and a low resisting power, the development of inebriety is sure to follow. In this way alcoholism or inebriety is a very common entailment, following from syphilis.

There are many reasons for believing that the alcoholic or inebriate, who has had syphilis, is far more degenerate and suffers from a greater variety of psychoses or neuroses, than do other users of alcohol. Frequently, delusions of exaltation and depression, that are very intense, indicate a possible syphilitic origin; and this is farther confirmed by the almost specific effects of mercurial treatment in the disappearance of the drink craze and the other strange symptoms associated with it.

There are several advertised cures for the drink disease, in which mercury and arsenic are the most prominent factors. Some of these cures are sustained by a great variety of clinical experience. In all probability, the results depend more largely upon the presence of syphilis, and the effects really come from the antisyphilic action of mercury.

Not unfrequently, a symptom of exaltation and intense egotism in inebriates refers back to some syhpilitic infection, of which there is no history. A mercurial treatment lessens it to such a degree as to confirm the diagnosis. A case of some prominence was the subject of very widely different diagnosis. His principal symptoms were muscular trembling, unusual debility after exertion, and an unreasonable egotism. Various plans of treatment failed. Finally he came under the control of a village physician, who for some unknown reason, treated him with large doses of antisyphilitic remedies. His recovery was very marked.

Another example was that of a mechanic, who, from prostration from an electrical shock, developed a most intolerable craze for spirits, that was practically a dipsomania. At intervals the mania for drink was intense and uncontrollable, and, only after excessive depression and coma from its use, did these symptoms subside. Then the same exaltation and egotism came on. His

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case was called paresis, and there were well marked symptoms of failure of memory, reckless thought and acts, change of habit, and indifference to all the social relations. Here, the same antisyphilitic treatment cleared up the symptoms, and to a large measure, he recovered; but finally died of pneumonia.

Persons who are found to have very high tensioned arteries, and who use spirits in so-called moderation, are to be suspected of having some organic changes in the arteries or brain centers. Here antisyphilitic treatment can be safely used, on the presumption that some original infection is responsible for it. Numbers of cases are reported, of active business men, suffering from slight hemorrhage. Their history shows that they have used spirits in moderation for years. Usually wine at the table at meals, or beer at different times during the day.

The question arises how far the anaesthesia of spirits has been an active or exciting cause in this condition. Where venereal infection can be excluded, it is reasonable to suppose, that some inherited degenerations or great faults of living, are the most active causes. Of course the spirits precipitate and emphasize many changes which might be prominent without this exciting cause When spirits are used freely, as a tonic and stimulant, many of these obscure conditions are treated with spirits as a drug. It is very evident that this treatment simply aggravates and increases degenerations which might be checked by other means. The following is an example.

A lawyer supposed to be temperate and vigorous, who had lived a life of some irregularity, in respect to diet and work, suddenly began to drink to great excess and defended his position to his friends. After a period of continuous drinking, his symptoms changed to those of a perodic and his health deteriorated very rapidly. Various diagnoses were made and various methods of treatment were tried. The central thought seemed to be, that alcohol was the only responsible agent. Efforts to abstain by drugs and cures, all failed. Finally he died and a post-mortem revealed a tumor in the brain. No one suspected that the alcoholic craze was the result of the pressure.

Another case in which after a period of acute indigestion, extending over a year or more, the patient suddenly drank to excess and insisted on using spirits daily, against the advice of his friends. This continued for a year or so, when he died suddenly and a cancerous growth was found about the stomach and the pancreas. What the connection was between the alcoholic craze and the cancerous growth of the stomach is not clear, but there was a distinct relation of cause and effect.

One who has spirits in small quantities regularly or at intervals, for years, has positively been encouraging different forms of degeneration, both physical and mental. In such a case, various profound organic changes may suddenly appear and the active cause, alcohol, may not be suspected. In these later times, when the true physiological action of spirits is studied, its influence is traceable, in many instances, as clearly as the syphilitic poison. Examples are numerous, and yet these facts are largely unknown. A man who suddenly develops acute organic lesions of the brain, cord, or active organs of the body, which go on to fatality, with a history of having used alcohol for years before, as a beverage, presents a connected chain of cause and effect which is not usually recognized.

In much the same way in one who has neglected the ordinary rules of life and living, whose diet and sleep have been irregular and broken, and who all unexpectedly becomes an alcoholic

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drinker, the same chain of degeneration is present. The alcohol may be called the cause, when in reality it is a symptom.

A man, who suddenly becomes insane and a criminal, will be found in many instances to have a history of degeneration from syphilis, alcohol and other causes, about which there can be no mistake.

There is a vast field here of unrecognized causes and symptoms, that await a future investigator. The fact of having had syphilis, no matter how slight the attack, and the fact of having used alcohol up to the point of toxaemia, or continuously for a long period in so-called moderation, is most significant in the history of the patient.

The so-called "sowing of wild oats" is certain to be followed by a harvest sooner or later, and this fact is not recognized in medicine as it should be. Recently, a paper by a German author presented the subject of melancholia, in which the author concluded that it was an independent, depressive insanity, coming on in later life, not as the direct result of any one cause. He cited a number of cases of old men, who suddenly became profoundly depressed and committed suicide. The paper was exhaustive, but it failed to give a history of the early lives of these men, and failed to trace the later melancholia to an earlier active cause.

Apoplexy, paresis, carcinoma, tuberculosis, alcoholism and a variety of so-called diseases, appearing after fifty, can all be traced back to conditions of acute degeneration. Traumata, toxaemias from alcohol, infectious diseases, and other causes. It is very doubtful whether persons every fully recover from a profound shock or lesion of the body from traumata or toxic causes. It is certain, that the anaesthesia of alcohol, continued any length of time, produces changes, predispositions and susceptibilities which leave a marked impress on the system in later life.

It is also certain, that from the distinct anaesthetic effects of alcohol, its dehydrating properties, that suspend susceptibility and sensation, a person never fully recovers. Acute intoxication is practically a coma and trauma from chemical agents, and while recovery may seem to follow, it is undoubtedly certain, that injury has been produced, which, in some way, influences the organism during the remainder of life.

* * *

## DIAGNOSIS OF EXTRA UTERINE PREGNANCY.

Thelin has shown that the four varieties of extra uterine pregnancy have the following symptoms:

1. Incomplete tubal abortion. Dull pains with repeated attacks of severer pains, accompanied by fainting and vomiting. Bloody vaginal discharge becoming more profuse after the attacks of pain, often brownish in color. Disturbances of miturition and defecation. Now and then discharge of decidua. General weakness and anaemia. Tumor in the pouch of Douglas, growing rapidly in addition to a tubal tumor at the side of the uterus, which is often difficult to differentiate from the hematocele.

2. Complete tubal abortion. Some attacks of acute pain. The general condition suffers but little; no anaemia. The haematocele is inconstant, and when present not large. Often only a free hemorrhage is found in the abdominal cavity.

3. Tubal rupture. Mostly a sudden catastrophe occurs. While in good health a severe abdominal pain, fainting, pronounced anaemia. Marked sensitiveness of the abdomen.

4. Tubal pregancy with intact tube. Here the symptoms are delayed menstruation, a tubal tumor is present and from the vagina there is a dark, viscid bloody discharge.

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# Diagnosis of Cancer of the Rectum.

By Charles J. Drueck, M. D., Chicago, Ill.

WE CANNOT begin to epitomize in the short introductory space at our command this comprehensive article of Dr. Drueck's on the subject of rectal cancer. But we urge all of our readers, even though it be a little lengthy, to read, mark, learn, and inwardly digest every line of it. The author's statement that 95% of all intestinal cancers attack the lower bowel, and of these 80% occur in the rectum, is a sufficient indication of the relative frequency of this distressing disease, and should therefore awaken a lively interest in the general practitioner in its diagnosis and treatment. We particularly commend that part of Dr. Drueck's paper which sets forth the differential diagnosis of rectal cancer from other conditions which simulate it. This is, perhaps, the crucial point in the whole matter, at least so far as the general practitioner is concerned, as an early recognition of the true nature of the disease is a powerful factor in successful treatment.

THIS paper is not intended to elaborate any technic of treatment, because that is definite enough once the presence of the cancer is known. I wish however to call your attention to the clinical pictures of this trouble when located at the lower end of the bowel and to consider the different types together with the symptoms and degree of malignancy of each. I presume to take up your time with this subject because certain writers state that the diagnosis of cancer in or about the rectum is easy, and yet I see every now and then a growth which has progressed considerably without being diagnosed, although the patient has been in charge of careful and well informed physicians. I am also free to confess it is always a source of anxiety to me in making a rectal examination to be sure that there is or is not a malignant growth present because I am as fearful of erring one way as the other.

Cancer is the most fatal and sometimes one of the most painful diseases we have to meet in the rectum. Its exact cause here, as elsewhere in the body, is obscure. The theories advanced are so much at variance that the writer is not prepared to advance an opinion. Statisticians and Pathologists differ considerably in their reports, but it is safe to say that the large bowel contributes about 95% of all of the cancers of the intestinal canal and of these 80% are found in the rectum and 15% in the colon. Cancer of the bowel is much more frequently found now than formerly, but this remark applies to cancer in general, and is in a measure due to better diagnosis and more careful collection of cases.

### Location and Manifestations.

As regards the location of the disease, Cancer is most frequently found about three to five inches within the rectum, the lower limit of the growth being about on a level with the internal sphincter. Next in frequency is the region about the anus, and least frequently is the growth found in the upper rectum or sigmoid. The region extending up from the internal sphincter is not only the most frequent site, but also the most fatal, because at this point the disease more rapidly runs it course and is more liable to accidents on account of increased anatomical dangers to obstruction. Williams estimates that there are

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forty cases of cancer within the rectum to three at the anus. The different proportions of epithelial structure and stroma in each cancer determines its degree of malignancy and also its physical characteristics.

At the anus squamous or pavement cell epithelium is the rule and is the same form of cancer as is so commonly seen on the lip. It begins as a hard warty nodule just under the skin at the muco-cutaneous junction. Not within the rectum. It makes slow progress and gradually develops an indurated base. From the beginning the skin is fixed to the growth and is not movable over it. The tumor is in the skin and does not spread to the deeper structures.

Microscopically there is found the characteristic nests of squamous epithelium which invade the lymph spaces from the surface. The stroma is made up of fibrous and myxomatous tissue and is pretty well supplied with blood vessels and inflammatory corpuscles.

The growth does not ulcerate until late in its existence. The ulcers scab over quickly, but sloughs away beneath the scab and when the crust is removed the ulcer is larger than before. From the ulcer exudes a watery fluid. Around the ulcer develop other nodules and the tendency of the growth is to surround the anus and invade the perineum rather than to creep into the rectum. The indurated base that was first felt about the nodule is constantly widening about the other nodules and ulcers.

During the nodular stage of the cancer growth there is no pain and also as the growth invades the perineum it is not sharply painful. Most patients speak rather of an uncomfortable feeling or a soreness. If the anus is eroded, which however is rare, the plain is similar to irritable ulcer or fissure and begins as early as the growth pushes through the mucous membrane.

The cancerous ulcer bleeds or oozes blood easily by abrasions, but the hemorrhage is usually slight.

**Differentiation.**

Having now seen the clinical picture of cancer at the anus, let us differentiate it from other ulcerations of this region.

1. The lupoid ulcer begins at the same point, but the ulcer is clear cut and bands of cicatrization develop. These bands break down shortly after they form, but other scars form and clinically we usually find some of these bands. The ulcer spreads rapidly and sometimes involves the whole buttock. The edges of the ulcers are not thickened. The base of the ulcer is soft, but beneath it is a hard indurated mass. Examination of scrapings will usually show Tubercular Bacilli.

2. The plain Tubercular ulcerations differ from the Lupoid in that they first appear as anal fissures. They may be single or multiple, but as they spread they soon coalesce into one large ulcer. They are not painful. About the base of the ulcer is a dense fibrous layer which seems to limit the depth and so the ulcer may surround the anus without reaching the connective tissue beneath the skin. It is a singular fact that any dense scar will act as a barrier to the spread of the ulcer. Probably because of the lack of blood vessels.

3. Simple traumatic ulcers at the anal margin differ somewhat from similar ulcers on other parts of the body because numerous bacteria habitats of the intestinal canal abound in the skin of these parts. The ulcers are irregular in outline with red, but usually sharp flat edges which slope down to the base of the ulcer. The base is crater shaped with lots of granulations and generally freely discharging pus. This pus is foul smelling because of the many sudoriferous glands about the parts. The granulations bleed easily on wiping. The pain on defecation may be slight, but is not acute.

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4. Eczema about the anus is rarely of the papular type, but is usually the erythematous form. In chronic cases the skin becomes dry and brittle and cracks on stretching. Beneath the eczema the skin is indurated, but the hardening is in the skin and not beneath it as in cancer. The whole trouble is in the skin and moves with it. The ulcers if present are shallow.

5. RODENT ULCER—The edges of the Rodent ulcer are hard and well defined. The ulcer begins in the skin and grows deeper and has few granulations. It begins on the skin about the anus and not at the muco-cutaneous border as does cancer. The induration about the base of the ulcer is only moderate in amount in contrast to the wide induration about cancer.

6. Irritable ulcer or fissure. The cardinal sign of irritable ulcer is the sharp lancinating pain at stool. The ulcer is located in and conforms to the shape of a fold in the anal mucosa. It extends up to the sphincter grasp. It is shallow and the edges are inflamed, sometimes even thickened, but never indurated. If there is a tumor associated with the ulcer it is most likely the sentinal pile of the ruptured crypt of Morgagni.

7. WARTS—These may appear at the anal margin, but have no indurated base. Ulceration of the warts occurs only rarely and then usually in dirty subjects only.

8. CHANCERS—The most common site of chancers is in the skin just outside of the anal folds. The ulcer resembles chancers, elsewhere it is superficial and circular in outline, but the induration at the base does not extend beyond the edges. The borders of the wound is red, but the center is dark gray. Chancers here are not painful.

**Cancers Within the Rectum.**

Within the rectum the diagnosis of malignant tumors is more perplexing. I have seen a distended urinary bladder and again a mass of impacted feces set a medical man worrying about a rectal tumor. These cases both of course were easily cleared up under their own appropriate treatment, but there are a lot of cases that are not so easily diagnosed.

The cancers here belong to the columnar cell growths and resemble the histological structures of the mucous membrane from which they grow. They are adeno-carcinomas and closely resemble the benign adenoma; but the glandular hyperplasia of the simple adenoma is restricted to the mucous membrane and grows up into the lumen of the bowel, while the carcinoma infiltrates the submucous tissues and spreads out in all directions. Microscopically the resemblance between the groups of cancer sells and the tubules of the normal gland are so great that the tumor may be mistaken for a benign adenoma, but in the margin of the growth quite atypical cells will be found.

These adenoma may arise in the cylindrical cells which line the crypts of Lieberkuhn and without any change in structure pierce the deeper layers of the rectum and produce metastasis. Microscopical section of such tumor does not determine its character as to benignancy. Although these growths may be benign at the start the cylinder cells very soon proliferate in some part of the mass, forming solid strings of cells. The goblet cells then disappear. Not all adenoma here however are benign at first. Sometimes the cells become polymorphous and fill up the alveolar spaces and we have an alevolar carcinoma. The farther the cancer tissue is removed hystologically from the normal the more malignant it is.

These cancers arise above the sphincter and are easily differentiated from the squamous variety. Early in its existence the growth may appear pedunculated, and clinically it is impossible to distinguish from simple adenoma until the ten-

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dency toward a broad infiltrating base shows the malignancy. Later ulceration occurs and inflammatory changes are superimposed; all being aggravated by the irritation of the feces. The cancer varies somewhat in gross and microscopical appearance and also in clinical history according to the histological structure which predominates in the make up of the growth. Thus although the same elements are used we find encephaloid scirrhus or melanotic cancer.

The encephaloid cancer arises primarily in the crypts of Lieberkuhn and is enclosed in a connective tissue capsule which sends trabeculae into the mass, dividing it into lobules. The cells are large, round and nucleated. It is often vascular with large veins coursing through it and on its surface. In the interior extravasations of blood give the tumor a soft, mushy feel and it resembles brain tissue in appearance; hence its name encephaloid. In other instances it is spongy and shreddy like placenta. Later a large amount of cancer juice containing cells exudes on pressure, and if dropped into water it quickly diffuses, giving the whole a milky appearance. Paget considers this a valuable rough test in diagnosis. If seen early the cancer is movable in the subjacent tissues, but when seen later it is soft and friable upon an indurated base. These cancers grow rapidly and may even fill the whole pelvis, involving the surrounding tissues while secondary growths appear in neighboring organs. The glands are involved early and if the tumor is removed it soon recurs, although considerable temporary relief is obtained by its removal and the cachexia disappears for a time. Digital examination is receptive because of the extreme softness of the tumor and the apparent fluctuation imparted, but a little fluid aspirated will clear all doubt by showing cancer cells and blood. As the deeper structures degenerate they become cystic with a mucoid, glue like, translucent yellow substance, which distends the tissues and the growth is called alveolar or colloid cancer. Generally speaking, it may be said that the softer the cancer mass the more rapid its growth and the greater its malignancy. These encephaloid cancers are the most malignant of the rectal tumors and are so friable that they bleed on the slight traumatism of an ordinary examination.

**Scirrhus Cancer.**

Scirrhus or hard cancer is the variety most frequently met in the rectum. It arises in the submucous connective tissue as a hard nodule beneath the normal mucous membrane and radiates out in various directions, but principally longitudinally up and down the rectum. These new extensions can sometimes be felt as hard bands or processes, claws, from which cancer receives its name. The cut tumor presents a cancer mass that is bluish white and gristly with masses of fat and fatty tissue between the trabeculae extending out into normal tissue. The center of the mass is generally degenerated and if the tumor is cut the center retracts, making a saucer like appearance. This has been called the cancer cup.

The scirrhus cancer is said to arise more frequently on the anterior wall of the rectum near the prostate and infiltrates all surrounding tissues and eventually involves the bladder. A circular stricture or collar forms about the rectum and as the lumen of the bowel is closed, an intractable constipation appears. Complete obstruction of the rectum may occur and even rupture of the gut from fecal accumulations above the cancer has occurred. Blood vessels and nerves appear to be crushed out of the tumor and there is very little if any hemorrhage or pain.

Ulceration comes on late in the scirrhus cancer and as there is very little absorption or toxemia the cachexia comes on late also. Complete obstruc-

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tion of the rectum may occur, and rupture of the gut from fecal accumulation above the cancer has occurred.

The diagnosis of scirrhus cancer is made by its hardness and contractility, but its history is often necessary to differentiate it from simple fibrous stricture of the bowels. This latter may exist for years with no other symptom perhaps than the intractable constipation. Kelsey reports a case of dysenteric diarrhoea which resulted in a stricture and presented a typical clinical picture of scirrhus cancer, but had existed for eighteen years. Histologically the scirrhus cancer stroma is abundant and the alveoli narrow, with the cancer cells frequently small. Fatty degeneration of the cells often occurs, but the stroma remains to contract. Secondary metastiatic growths occur late and there is hope of a cure by early and thorough excision.

Melanotic cancer is rare within the rectum and its histological relationship is not clear. It is classed as a carcinoma by certain pathologists and as a sarcoma by others. It is soft and medulated and has an increase of pigment. It is rapid in growth and very malignant and often becomes generalized. Only ten cases have been reported, and only six of these had complete histories. Five were men and one a woman. The ages varied from forty-five to sixty-four. Microscopical examinations were made in five cases and these were all classed as sarcomas. The symptomatology was the same as any rectal cancer, with the exception of one case where the stools were black, and also after making an examination the finger was blackened.

For all practical purposes we have within the rectum the Scirrhus and Encephaloid cancers only. Let us consider with what these tumors each are likely to be confounded.

**Symptoms.**

Cancer within the rectum begins insidiously and often gains so much development before the patient is aware of its significance that it is beyond hope of a complete cure. He supposes he has hemorrhoids or some other simple rectal ailment and dismisses it from his mind because he objects to an examination. The mild character of the symptoms during the early stages is peculiar to cancer situated above the middle of the internal sphincter, because the bowel has very little sensitiveness and considerable growth and even ulceration may exist without causing much uneasiness. But if the disease is below the sphincter there is great pain and the suffering itself may be of assistance in making an early diagnosis.

One of the first signs of trouble is a sense of fullness within the rectum or a feeling as if something is retained in the rectum after the bowels have moved. Later there is a tingling soreness after evacuation much the same as occurs ordinarily in healthy people after the passage of very hard fecal masses. Later both of these symptoms are associated with straining and bearing down when the sufferer has an evacuation and if the disease is near the anus this straining is sometimes violent.

With this sense of fullness in the rectum and the pain of each defaction there develops a slight morning diarrhoea or sometimes there will be several evacuations of mixed feces and mucus. When the sphincter is invaded the rectal wall is stiffened and the sphincter muscle is weakened and partial incontinence exists. When sloughing extends into the sphincter complete incontinence occurs and in the encephaloid cancer particularly a sanius discharge containing shreds of broken down cancer tissues escapes more or less continually and excoriates the anus and skin about the parts. This discharge has the odor of

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decayed flesh and once recognized is never forgotten. It is similar to the odor of cancer of the uterus.

**Ulcerations.**

The ulcerations of the cancer that produce the fetid discharge are of two kinds, that above the stricture and that of the growth itself. Ulceration developing above the growth differs from the cancerous necrosis in that it is superficial in depth, has a clean, smooth base and low, even edges. It results from pressure of and toxines absorbed from the retained and hardened feces that are lodged in the dilated portion of the rectum immediately above the obstruction. When this obstruction is relieved these masses are found to be dry and almost stony hardness and seem imbedded in the tissues, and as removed leave ulcerated spaces beneath them. This form of ulceration we usually find in the scirrhus cancers.

In the encephaloid growth the ulceration is different. Early in the disease the normal mucous membrane covers the mass, but the cancer soon breaks down. This degeneration may occur at one or several places simultaneously and the mucous membrane may be honey-combed with ulcerating spots through some of which the cancerous mass protrudes. Ulceration begins at the central or denser parts of the cancer and is not limited to the superimposed mucous membrane, but invades the deeper structures and in some cases extends to neighboring organs. The bladder is frequently opened and cystitis or a urinary fistula produced, the urine escaping through the rectum, while the feces are sometimes forced into the bladder and through the urethra, causing excruciating pain. This is one of the most urgent indications for colotomy. When the prastate or urethra are involved obstruction to urination begins. Smith records a case where the disease opened into the hip joint.

While the center is degenerating the periphery is advancing into new tissue. Around the edges the growth, together with the inflammatory reaction raises the borders and gives the ulcer a crater like appearance. The muscular tissue seems to have a greater resisting power and prevents somewhat the extension of the ulcerative process. The extension, however, progresses irregularly and creates a ragged edge. Gangrenous shreds of tissue are cast off and these have a very foul odor. As cicatrization occurs the rectum grows shorter until it may be only one-half to one-fourth its normal length. This contracting and the associated loss of fat about the parts produces the funnel shaped anus so pathonomonic of cancer.

The encephaloid cancer is prone to bleed because it breaks down so easily and so early. When mucus and blood are expelled it shows the presence of ulceration and is found in 90% of all cases of encephaloid growths. The hemorrhage occurs frequently and is usually slight, but its persistence produces anaemia and this is an element in hastening the end. In the soft cancers there may be a discharge of free blood, which rapidly weakens the patient, but the scirrhus growths bleed only sufficiently to smear or streak the stool if they bleed at all.

Obstruction of the bowel is a variable symptom. Sometimes an advanced scirrhus cancer which has narrowed the lumen of the rectum until it will hardly admit the end of the finger will still cause the patient very little obstipation. When the obstruction is located in the lower end of the rectum or at the anus the feces may be ribbon shaped or small pea like balls or the frequent efforts at defecation bring away small particles of feces mixed with mucus and pus. The clinical picture of the obstruction is similar to that of simple benign stricture and not in any way pathonomonic

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of cancer. The patient's history does not differentiate the disease and all depends on a physical examination, which requires great care and delicacy. However cancer in this region is of rapid growth and if a patient asserts that the stricture has existed for many years, it is evidently not malignant, but it must be remembered that carcinoma may be engrafted upon any benign growth or ulceration.

In the encephaloid cancer the passage of the feces is not so frequently interfered with, because ulceration begins early and the growth sloughs away enough to keep the passage open. Blood, mucus and pus mixed with the feces suggests a dysentery instead of the real disease. Ulceration into the surrounding tissues with the production of an abscess and fistula allows the extravasation of feces and often a large dissecting abscess.

**Examination.**

The digital examination is of great value in all rectal strictures and in cancer it is absolutely necessary.

The commonest form of cancer within the rectum is the scirrhus. It usually occurs just above the internal sphincter or in the ampulla of the rectum. It begins more frequently on the anterior wall of the rectum, but may occur elsewhere. It arises as a hard nodular mass and extends circularly until it involves the whole circumference of the rectum, leaving only a small opening in the middle. This latter condition is the usual finding when the physician is consulted. Mickulitz found three-fourths of his cases so progressed. Gussenbaued estimates that 65% of all rectal cancers are of this variety. These cancers grow lengthwise of the bowel very slowly and rarely involve more than two inches.

These cancers high up in the rectum and in the sigmoid are the most difficult to diagnose and have been repeatedly mistaken for diseased ovary of tube or for other pelvic tumors.

The encephaloid cancer occurs as a soft ploypoid mass very like a benign ademona but has a broad base which infiltrates the submucous tissue. These tumors contribute 15% of the rectal cancers. They break down very early and with few exceptions have reached this ulcerative stage by the time they are seen by the physician. By palpation irregular masses appear to have been broken off roughly and the raised edges of the ulcer give its crater-like appearance. The finger being well anointed and inserted feels this rough irregular edge and then passes beyond the constriction into a wider channel where frequently masses of hardened feces are found. Every possible care must be taken in passing the finger through the obstruction when it surrounds the rectum, especially if near the peritonal surfaces for fear of tearing through the friable wall and entering the abdomen. The necrosis may leave a very thin partition at some point or the ulceration in the bowel above the obstruction may be very deep. The finger must never be pushed hurriedly through a carcinomatous stricture and even soft bougies must be used with great caution. Numerous cases of rupture and sudden death have resulted from carelessness in making an examination.

**Differential Diagnosis.**

The scirrhus cancer must be differentiated from other fibrous masses within the rectum.

The congenital stricture is frequently unobserved until the child eats solid food and the stools are formed, but it is almost always found before puberty The symptoms are those of obstruction in an otherwise healthy child and of long standing where as carcinoma does not occur until adult life.

Benign fibrous stricture is the most difficult because sometimes it is impossible to differentiate, although its surface and edge is smooth in contrast with the

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cancer, which is irregularly nodular and rough. Of course the history of the case is entirely different.

The encephaloid cancer may be mistaken for the benign adenoma or papilloma which occur quite frequently and are important because they are sometimes very difficult to diagnose and so frequently carcinomatous changes occur in the benign tumor if it is left in situ or a cancer recurs when the apparently benign adenoma or papilloma has been removed. Those tumors are sometimes attached by a pedicle and even if they have a broad base it is never indurated. In as much as these tumors ars so liable to contain malignant cells or to develop malignancy later I never place much credence in laboratory findings of bits removed from the tumors because part of the tumor may be benign and another part be malignant.

Syphilitic lesions in the rectum may be mistaken for cancer. Particularly the encephaloid cancer. Chancres are very rare above the ano-rectal line. Mucous patches occur about the same time as the macaular eruption on the skin. Both of the lesions have a tendency in ulcerating to follow the blood vessels and lymphatics so that the ulcer spreads upward rather than laterally. There is considerable discharge of that peculiar chancre smell. It is very different from carcinoma.

Gummata begin in the connective tissues and if seen early the mucous membrane is free above the tumor which is round and elastic. They may be as large as an orange. Later they undergo fatty degeneration and ulcerate and the cicatrix may cause stricture.

In the Proliferating proctitis fragile villous teats hang from the mucous membrane. There is an abundant discharge of mucous-pus. The granulating mass is soft and its base is limited to the mucous membrane, but does not infiltrate below. The growth spreads all over the rectum, but is not limited to one part.

This gives the reader a general picture of the clinical features of cancer as found in the lower part of the large bowel, and will assist in a clear and early comprehension of this dread disease. What course of treatment shall be adopted depends upon many things and the surgeon must decide whether his treatment shall be removal with a hope of lengthening life and perhaps curing the patient, or shall it be simply alleviation of suffering. If the entire mass and sufficient perirectal tissue can be removed, the prognosis is relatively good, but in advanced cases the prognosis is bad regardless of the operation.

438 East Forty-Sixth Street.

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## OLD STORY IN NEW FORM.

She was a motherly looking old lady of the kind that beams placidly through gold rimmed spectacles. So when she accidentally dropped her open handbag on the floor and amid samples of silks and other feminine trifles there appeared a package of cigarette papers a faint gasp of astonishment went around the car.

A young man picked up the scattered articles, smiling a little as he handed her last of all the cigarette papers. For a moment she hesitated. Then she blushed faintly and explained:

"I use them to polish my spectacles with," she said. "My grandson Richard told me about them when he was home Christmas. They're the best things to clean glasses with you ever saw, but he only had a few of them and so I've just bought these. Just see!"

She took off her spectacles, deliberately smudged one of the lenses with her ungloved thumb, held up the clouded glass for inspection and set to work polishing it with the cigarette paper, while her fellow passengers looked on with amused interest.—New York *Sun*.

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# The Uses of Thuja.

By G. O. FARQUHAR, Zanesville, Ohio.

IN preparing this article, I consulted various authors, comprising the Physio-Medical, Eclectic, and Homeopathic Schools. The views of them all coincide as to the properties and therapy of the drug. Thuja seems to be a stimulating alterative, influencing both the mucous and serous membranes, and glandular structures. It has some astringent and emmenagogue property, and should not be given very largely in pregnancy.

The indications for the remedy are spermatorrhoea, in various cancerous conditions, especially schirrus, condyloma, and the epithelial varieties, and internally if the os uteri is involved; and if attended with hemorrhage, by applying locally can arrest it. It controls capillary bleeding.

In syphilis, the exanthemata in general, typhoid, scarlet fever, diphtheria, smallpox, cerebrospinal meningitis, you will always find thuja strongly indicated. Should be given in all forms of septic poisoning, either of internal or external causes.

You will find in vaccination it is the remedy "par excellence," or from any after effects of it. Females frequently will have a severe leucorrhoea as the result of vaccination, or some obstinate skin trouble, which you can readily cure by the use of thuja.

Blair says internally thuja is "a terebinthinate," and very useful in diseases of the bladder, enuresis of the young and dribbling of the old; and I find it also a very excellent remedy in chronic cystitis, in combination with soda benzoate, vesical atony, suppressed gonorrhoea, and gonorrhoeal rheumatism.

Hydrocele and orchitis are both curable with thuja. It also possesses strong anthelmintic properties, and is of great value in "hook worm diseases," an antiseptic in gastric fermentation, very useful in appendicitis. Give it locally as well as internally.

I also find this the best remedy in combination with neutralizing cordial in aphthous troubles and the nursing sore mouth. You will obtain good results in enlarged prostate glands, gleet, etc.

I use it in internal piles, combined with echinacea or boroglyceride. Inject it into the bowel, and give it internally with aesculus, colocasia, with a solution of soda sulphas and glycerine.

I give you a short article taken from a homeopathic work published in St. Louis, as follows: Abnormal growths, glandular indurations and diarrhoea, general indications,—This remedy exercises a peculiar influence over abnormal growths and tissue degenerations, especially those of an epithelial character, warts, condylomata, epithelioma, cancer, urinary disorders, nocturnal incontinence, enuresis, spermatorrhea, chronic skin diseases, post nasal catarrh, nasal polypus, senile gangrene, hydrocele, purulent *otorrhea, with offensive odor,* face ache, the parts burn like fire.

Diarrhoea, *stools* yellow, watery, copious, and *forcibly expelled,* worse in morning. Gonorrhea, urethra swollen, scalding urine, yellow, green watery discharges. (In this condition I combine soda phosphate, very small doses, which usually corrects it, and in some instances nux vomica.)

Thuja is one of our most valuable remedies, and should be thoroughly studied, and the more you look into it and use it, the stronger your belief in its merits. I would like to say to you that in peurperal septicemia, this with echinacea, with some of your arterial sedatives, would give you good results.

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# CURRENT MEDICAL LITERATURE.

## BELLADONNA IN DYSPEPSIA.

MOORE & KILROE communicated a paper on this subject to the Royal Society of Medicine. Clinical experience having established that the administration of belladonna led to a definite amelioration of the subjective manifestations of certain types of dyspepsia, it was decided to conduct a systematic investigation into the action of this drug on the functional activity of the stomach in a series of consecutive cases, both with and without manifestations of gastric disorder. The results of this investigation confirmed and amplified the earlier observations of Riegel, in showing that belladonna exerted a definite inhibitory effect on the secretory activity of the stomach.

The administration of the drug along with, or some short time previous to, a test meal was associated with a well-marked diminution of the acid and peptic values of the stomach contents; this effect was generally greater in such pathological conditions as were associated with hypersecretion, but still obtained in conditions of hyposecretion. The effect of the administration of belladonna on the volume of the stomach contents was but slight, and variable; but whilst by this method it would appear that the drug influenced but little the emptying of the stomach, more recent radiographic observations caused them to believe that it exerted an influence in inhibiting and relieving spasmodic contractions.

In the discussion which followed the reading of the paper Dr. A. F. Hertz said he had found belladonna useful in the treatment of gastic and duodenal ulcer. There was a remarkable difference between the action of atropine on the salivary secretion and the gastric secretion—in the one a diminution in quantity with no change of quality, and in the other a change in quality with no change in quantity. Dr. H. French alluded to the bullous dermatoses and their causation by autointoxication, and to the use of belladonna for such, suggesting that its activity might be due to some modification of the contents of the alimentary canal. Sir John Broadbent asked as to evidence of spasm in the cases recorded, referring to the dilatation of the stomach in duodenal ulcer, which he thought might be due to pyloric spasm. The President asked if the treatment by belladonna needed to be continued, and as to the usefulness of the various preparations of the drug. Dr. Craven Moore, in reply, said his impression was that the drug was one of distinct value, though the absence of lasting effect was clear.

## PHYSIOLOGY OF SLEEP.

The *British Medical Journal* reviews an address by Dr. David F. Harris, of the University of Birmingham, on the physiology of sleep. Dr. Harris has shown that the causes of sleep are at least four in number, and in speaking of sleep, he adopts a broad view and includes all those states of loss of consciousness which, when effected by causes which are of natural origin and of normal intensity, are physiological in type, and when they lose this physiological character become pathological. He shows most clearly that if the flow of blood to the brain is short-circuited, so that its blood supply is lessened, sleep may ensue, and that when this short-circuiting is effected by agencies which are abnormal, then pathological sleep or coma is the result. The unwisdom, then, of attempting mental or bodily work shortly after a meal which attracts blood to the splanchnic or digestive area is apparent, just as it is also not necessarily

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unwise to have a heavy meal shortly before retiring to sleep, *pace* the advice of past teaching. In the former case, mental or muscular effort is hampered by the want of blood in the organs thus dragged into function; and in the latter, the anaemia of the brain produced by the operation of the digestive tissues is just one of the effects which it is desirable to secure to induce sleep. The meal, of course, must not be an injudicious one, which, by producing discomfort in the process of sleep-digestion (Pavlow), disturbs such sleep, and in the awakening moments leads to the development of dreams or nightmares.

Discussing a second factor in the causation of sleep, Dr. Harris touched upon a matter which is of vital importance to the national health, and more especially to that part of the national life which is spent in large cities. Sleep may be induced by the diminution or absence of sensory stimulation arriving through such channels as the eye, hearing, or common sensation. No doubt we can get over the almost day-like illumination of many a town or city bedroom by the use of blinds at night, but how can we with the "open window" shut out the fiendish noises which are created alike by cats and dogs, and by the bawling rowdy boys and girls who, to their own undoing as well, are allowed to make night hideous? Dr. Harris is quite right when he points out that in our slavish worship of "freedom of the subject" we tolerate a licence to make these unnecessary noises in our public thoroughfares. These acts of rowdyism should be treated as misdemeanours as rigorously as any other public nuisance.

A third factor in the production of sleep is the relative diminution of psychic activity. Not only is sleep impossible to the child after the excitement of a party or a pantomime, but in the same way insomnia is one of the frequent possessions of those who, by necessity or by custom, pursue mental work to within a few moments of the hour of retiring. A certain well-known divine, who was asked how he managed to preserve his health and vigour to a ripe old age, explained it on the ground that a 10 p. m. he refused to worry about anything. And, lastly, Dr. Harris brings to our notice the physiological belief that sleep in its periodic recurrence in the night hours—a recurrence which in a normally balanced individual persists in some cases undisturbed throughout life—may be but an expression of chemical influences which, hitherto unsuspected, have at last been given their due prominence. Perhaps far too much has been said of the periodic activity of our nerve centres, which, on the one hand, are capable of producing the rhythmic discharge of cardiac energy familiar to us all at least in the pulse-beat, and on the other, by rhythmic reservation of energy, bring about that filling of the capillaries of the skin which is held by some to be such a regular accompaniment of sleep. The tendency of modern thought is to view these recurrent changes rather as the effect of recurrent causes, such as the manufacture in unknown recesses of the body, of "fatigue toxins". Sleep, then, becomes but an expression of the relative increase or concentration of these suspected, but undemonstrated agencies, and insomnia may, in the absence of the other three groups of causes, be merely due to an absence, or, curiously but yet truly enough, to an excess of them.

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## THE STETHESCOPE.

In his new volume, "Rewards and Fairies," Mr. Rudyard Kipling reintroduced such a charming collection of ancient silhouettes in "Puck of Pook's Hill." The new series of ghosts of the past include Laennec and Nicholas Culpepper, the great herbalist. René Théophile Hyacinthe Laennec was born in 1781 in the beautiful old Breton town of Quimper, and on the north side of the noble cathedral stands his statue.

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Laennec was a surgeon in the Republican army in 1799 and served in the Morbihan. Mr. Kipling's sketch of the father of auscultation has charm and interest, and if he has taken liberties with facts we do not suggest that he has exceeded the romancer's license. If we accept Forbes's careful biography of Laennec implicitly—and it was written immediately after the physician's death, being compiled from such excellent sources as the memoirs by Kergaradec and Bayle, supplemented by notes contributed by Laennec's cousin—the true story of Laennec differs from Mr. Kipling's presentment. From these biographers it seems proved that after 1799 Laennec was occupied in Paris at the clinic of La Charité, and up to 1818 was busily engaged in a constant output of important writings. In 1818 he broke down in health, probably from incipient phthisis, to which he ultimately succumbed in 1826. In 1821 he returned to Paris and resumed his post on the staff of the Necker Hospital. Mr. Kipling represents him as a prisoner in England at some date subsequent to the battle of Assaye, and describes him as experimenting with wooden stethoscopes (shaped liked trumpets) in a Sussex village. Laennec in his great treatise describes vividly his first use of an impromptu stethoscope, which consisted of a roll of paper, and the incident, he states carefully, occurred in 1816. The early history of the stethoscope is on the whole well authenticated. In the introduction to Laennec's "Diseases of the Chest" (second edition, 1826) various kinds of materials are mentioned as employed by the discoverer — paper, wood, glass, even goldbeater's skin—but they all had a cylindrical form, and there remains no doubt as to the final shape in which Laennec left the stethodiameter and 12 inches long, perforated scope, a cylinder of wood 1½ inches in by a bore three lines in diameter, and hollowed out at one end into a funnel-shaped cavity of the same depth as the external diameter of the cylinder. The late Sir George Burrows rescued from the wards of St. Bartholomew's Hospital the remains of such an instrument, which had been the property of Dr. Bond, afterwards Regius professor of medicine at Cambridge. Burrows and Bond were two of the first to study auscultation at St. Bartholomew's, when they were serving as clerks to Dr. Latham in 1827. Burrows's instrument had one part missing when it found its way into the Museum of St. Bartholomew's in 1887, and no instrument maker in London could be found capable of restoring it, but a complete example was accidentally discovered at Westerham in Kent by Mr. A. Maude, and this is now in the same museum. The construction of these models corresponds exactly with Laennec's own description.

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## THE INFLAMMATORY "PELVIC MASS."

Lipman, in the *Journal of Obstetrics and Gynecology* of the British Empire, deals with local inflammatory disease of the female genital organs, that is to say, with inflammations of the uterus and adnexa, and the pelvic cellular tissue, for it is any or all of these structures when involved in an inflammatory process which come to constitute the inflammatory "pelvic mass." In particular terms the mass is a metritis, salpingo-ovaritis or a cellulitis, single or combined, unilateral or bilateral, together with intraperitoneal adhesions and exudate. All degrees of the process occur, from the unilateral small deposit to the complete "choked pelvis," where the viscera are no longer discrete, and the pelvis is occupied by a single firm undifferentiated mass.

Out of 832 cases treated in hospital, one-fifth have been instances of inflammatory disease of the uterus and its

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adnexa. In the extension of the disease the viscera become involved. The "mass" is either within or without the peritoneum, the site depending largely upon the nature of the infection. Within the mass itself any stage of the inflammatory process may be discovered, from lymph exudate and oedema to necrobiosis and tissue necrosis and pus, either as a pyosalpinx or ovarian abscess.

The organisms that are chiefly pathogenic in the female genital tract are the gonococcus, streptococcus, and tubercle bacillus. The two first invade the genitalia from below, the last attacks from above, its primary pelvic focus being the Fallopian tube. These three infections occasion the "inflammatory mass," but are clinically distinct, and can be distinguished one from the other. The gonorrhoeal variety of the "inflammatory mass" has a history of purulent leucorrhoea and urinary disturbance, with pus in the urethra and Bartholinian ducts, or perhaps a granular vaginitis or catarrhal. Such evidences may persist for years untreated, and the resulting mass will be a salpingo-ovaritis and may be of any size. It is frequently pelvic and not large, or bilateral with the uterus recognizable between; often it occupies the pouch of Douglas and the uterus is not greatly displaced. The streptococcal variety has a history of childbirth or abortion; if acute the fever is high, there is pain, and usually a unilateral mass in the pelvis fixed to the pelvic wall. The mass is of any size and the uterus is often greatly displaced.

The tuberculous variety is associated with failing health and some menstrual depravity. The mass is bilateral, elastic, and rounded, little nodosities may be found in the isthmian portion of the tube, the uterus is not much displaced. Where tuberculosis is suspected the von Pirquet reaction is often valuable. In 164 operative cases, 113 were gonorrhoeal, 19 tuberculous, 17 streptococcal, and 15 of mixed infection. More than half of the cases escaped operation and did well with rest and palliative measures. The writer operated upon 164 cases of inflammatory "pelvic mass"; he considers that where the infection is streptococcal operation is contraindicated, though drainage may be established or abscesses evacuated. In gonorrhoeal cases operation cannot be undertaken during the acute stages. Later posterior colpotomy with complete tunnelling of the "pelvic mass" is a wise, curative, and conservative measure. Extirpation of the diseased organs should only be made as a last resource. In tuberculous lesions the process is progressive and should be dealt with as soon as possible. Extirpation is the only cure.

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## TREATMENT OF BRONCHIAL ASTHMA.

August Goldschmidt, in *Muenchner Med. Wochenschrift,* starting with the admission that it is impossible at present to effect a permanent cure of bronchial asthma by medicines, records the results which can be obtained by a few drugs in this affection. He leaves alone the question of the physical treatment of asthma, since this requires institutional treatment. In the first place, he believes that 1 per cent solution of morphine with 1 per 1,000 solution of atropine sulphate gives the best results during an acute attack. He advises not less than 1 c.cm. of the solution injected subcutaneously. He is doubtful whether it is advisable to use adrenalin for this purpose.

If the attack can be dealt with very early, von den Veldon's theobromine preparations do good service. He prefers the following prescription: R Caffeine valerianic. 0.25 gram; theobromin. sodiosalicyl. 0.5 gram. M. Ft. pulv. Sig.: One or two powders to be taken during the attack. If the attack has been set going by an attack of bronchitis, iodides appear to answer well by removing the secretion. He prefers the sodium salt.

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He does not like pyrenol as well as the ordinary iodine, but when the patient does not take the latter well sajodin may be used.

The treatment of asthma apart from the acute attack consists chiefly in giving atropine or some substitute. He is, however, of opinion that both when given by the mouth or subcutaneously, the well-known intoxication symptoms occur frequently. Fickler has recently reported a case of atropine mania in an asthmatic. A less dangerous method of application consists in applying it by means of a nasal inhaler.

His prescription is as follows: R Alypin. nitr. 0.3 gram, eumydrin. nitr. 0.15 gram, glycerini 7 grams, aq. dest. 25 grams, ol. pini pumil. 1 drop. M.D.S. To be inhaled from the spray apparatus (Tucker's). Since alypin produces some hyperaemia, it is advisable to add 8 to 10 drops of a 1 in 1,000 solution of adrenalin or suprarenin to each 10 c.cm. of the solution. As the adrenalin does not keep well, it is not wise to mix it with the spray solution, but to add it fresh each time. The prescription given above can be made up for 35c (according to the German scale of charges). It has answered well in six out of seven cases.

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## PROPHYLAXIS IN OBSTETRICS.

Summarizing an excellent article in the *British Medical Journal* on this topic, A. W. Russell presents the following conclusions:

1. Contracted pelvis is mostly a legacy of the rickety infant. Much can therefore be done by way of prevention if enlightened attention is paid to the feeding and hygiene of the baby from birth.

2. The education and physical culture of the growing girl must be supervised. This is specially important at the onset of puberty and during adolescence.

3. The young woman should understand her functions, and in her work should be protected from debilitating influences.

4. The young wife, and especially the expectant mother, should receive the further information that is necessary for her guidance in relation to the sexual functions and the preparation for motherhood.

5. As to the complications of pregnancy it does not seem to be generally realized by the busy practitioner out of how trifling ailments overlooked the most serious troubles arise, and how much special obstetrical studies have in recent years contributed to their more scientific treatment. I refer you to what I have already said about pernicious vomiting of pregancy, which so often develops out of the ordinary digestive disturbances, and eclampsia which results from renal or hepatic disorders which have not been looked for or have been left untreated. In the antepartum haemorrhages, too, it has been clearly shown by statistics that if the condition is properly diagnosed under aseptic precautions and the patient put under the care of a skilled obstetrician at any early stage before she has been carelessly handled, the chances of the mother and child are infinitely better. The same remark applies to the early diagnosis of really difficult cases of contracted pelvis or marked disproportion between the sizes of the child and the pelvis.

6. With regard to the process of labour I desire to give fresh emphasis to several points.

(*a*) Abortion or miscarriage is really a miniature labour and should receive at least the same prophylatic care as ordinary labour. The mother needs to be taught this otherwise and earlier than by the unhappy lesson of a weakening haemorrhage or a septic infection.

(*b*) The induction of premature labour has still a place among obstetric operations, but it must be done after careful, and even repeated, examination

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under an anaesthetic, so that the pregnancy may be allowed to run as near the full term as is consistent with spontaneous delivery. When this is done the results are most satisfactory, as I can testify from a recent series of cases conducted on these lines in the Glasgow Maternity Hospital. It has been a great advantage to Glasgow to have its new maternity hospital with abundance of room, so that apart from simply providing for labour when it comes on, patients may receive prematernity treatment, and may be admitted, as now frequently happens, for the proper investigation and treatment of complications arising during pregnancy. This has proved itself a great boon, alike to the practitioner and to the patient, and not the least important of the cases that need such consideration are the patients who can thus be saved from operative procedure later on by the induction of premature labour under favourable conditions.

(*c*) When we come to consider prophylaxis in relation to full-time labour it is difficult to select points for emphasis, and I shall confine my attention to difficult labour in relation to the use of the forceps and to the scope of modern operations.

The forceps should be considered a surgical instrument, and its use a surgical operation. As a consequence the sterilization of instruments and the disinfection of all parts of operator, nurse, and patient, that are liable to be touched, should be thorough, and this asepsis should be maintained. In this way there is some hope of avoiding the septic infection that so frequently results from handling. The forceps should never be used without distinct indications on the part of the mother or child of the need for it, and delay in the labour is very rarely a reason in itself. The use of the forceps should always be preceded by a careful measurement of the pelvic cavity, so far, at least, as to gauge the relation of the child's head to the pelvic brim. One of the painful experiences of an obstetrician in consulting and hospital practice is to get cases submitted to him after prolonged use of forceps or repeated attempts at their application that would never have been tried in this way if an intelligent examination had been made, and to him is left without choice the melancholy duty of breaking up the child when one of the newer operations might have saved it and been ever less dangerous to the mother.

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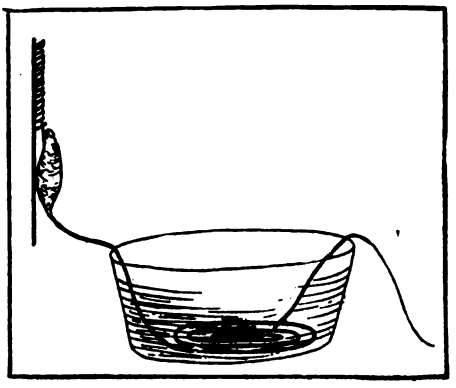
## SIMPLE METHOD OF RECTAL FEEDING.

Edward C. Hill, in the *Journal of the A. M. A.*, describes and illustrates a device of his own invention for proctolysis, whose simplicity may recommend it in emergencies in which a more elaborate apparatus is not obtainable:



Two-inch nails are driven into a small board at intervals of an inch for about two feet. This board when tied to the bed or nailed to the wall gives a means of lowering or raising the enema bag. About fifteen feet of medium heavy tubing is attached to the end of an ordinary two-quart enema bag, and a small rubber catheter is joined to the end of this tube. Near the edge of the bed is placed a pan containing two or more gallons of warm water, the temperature of which is about 100 F. Into this pan the tube passes and is coiled so that about twelve

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feet of it is immersed in the water. A heavy rubber such as is found in the lavage tube is needed in order that the tubing may not twist itself to the surface as happens with inferior or light weight tubing. The pan should be near the patient so that the rubber pipe and catheter may have only a short distance to pass to the rectum.

The enema bag is then leveled so that the flow shall be about twenty drops a minute. The normal salt solution or nutrient fluid, being warmed to about 99 F. when put into the bag, regains any heat lost during the injection in passing through the coils of tubing in the warm water. As a consequence the fluid enters the rectum at a fairly constant temperature. Once an hour an attendant can add a little hot water until the temperature is "a little warmer than the hand." Three gallons of water in an ordinary dish pan at a temperature of 100 F. in a room where the temperature is 72 F. loses only about four or five degrees in half an hour or longer.

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### INTRA-CRANIAL SYPHILIS.

Is the present mode of treatment of intracranial syphilitic disease adequate?

Sir Victor Horsley asks this question, originally raised by his teacher, Sir William Gowers, who pointed out the fact that cases of syphilitic lesions of the encephalon are not really cured, though often rapidly and very strikingly relieved, by antisyphilitic treatment, and he showed, further, that after a period of respite the symptoms tend to recur. The relative incurability of cerebral syphilitis of itself suggests that the time has come to take more active steps in the matter, and especially at this moment, when Ehrlich has demonstrated that though the acute symptoms can be rapidly checked by an arsenical preparation, this apparently is not applicable to the disease when it attacks the central nervous system.

The lesions specially referred to are gummata, pachymeningitis (including haemorrhagic pachymeningitis), acute and chronic, and so-called syphilitic optic neuritis.

Though in many cases relief is obtained by drug treatment, in not a few there is no improvement or a relapse occurs. In spite of these facts the position was advanced many years ago by v. Gergmann that syphilitic lesions (he specified gummata) ought not to be subjected to surgical treatment. Partly in consequence of this authoritative statement, but partly, doubtless, because at least improvement was so commonly obtained by non-operative procedures, the question of what principles should underlie our treatment has been rather left out of sight.

Horsely advances the view that our present lines of treatment should be remodelled in view of the analogy between the subdural and the intraperitoneal spaces. Upon this basis, and the concurrent requirement of getting as large a dose of mercury as possible in contact with the virus, he has obtained in cerebro-spinal syphilis, just as in tuberculous peritonitis, the most rapid improvement by opening the subdural space and irrigating with sublimate solution (1 in 1,000), even in cases where the ordinary routine drug treatment has failed in spite of a full and fair trial. Further, that since a gumma consists of a wholly necrotic focus of infective material, it is as important that it should be thoroughly eradicated as a similar tuberculous focus is treated.

Here, again, Horsley asks also for proof that a gummatous mass in the central nervous system has ever been cured by mercurial treatment, whether oral, inunction, or intramuscular. In the absence of such evidence, it clearly is only logical that a gumma cerebri should be extirpated and the subdural space irrigated freely with sublimate lotion.

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# THE DOCTOR HIMSELF.

## DOCTORS WHO HAVE BECOME CRIMINALS.

THE case of Dr. Crippin, the latest recruit from the medical profession—fortunately so little branded with the stigma of crime—to be suspected of a dastardly murder, leads a writer in a London journal to recall other interesting instances of sensational cases in which medical men have been the central figures.

William Palmer, the sporting doctor, of Rugeley, in Staffordshire, England, was a wholesale murderer, to whose account at least fourteen murders can be accredited. Among his victims were his mother-in-law, his brother, and his wife, at whose death he received from various companies in which her life had been insured, no less a sum than $65,000. This, however, was insufficient to settle his debts; and, as the insurance companies refused, on his brother's death, to pay, he was reduced to dire straits for money.

In his desperation, he resolved upon the death of one Cook, with whom, at the time, he was attending the Shrewsbury races. The deed was commenced at the Raven Hotel, Shrewsbury, where Palmer doctored his victim's grog, and brought by persistent poisoning to a tragic conclusion a week later at the Talbot Arms, Rugeley, whither the ruined man had induced Cook to accompany him. No action was at first taken, but the strange disappearance of the dead man's papers and money aroused suspicion. Soon sufficient evidence was obtained to justify the arrest of Palmer, who was duly sentenced to death.

Ten years later, Dr. Pritchard, a medical practitioner of Glasgow, was arrested on the charge of poisoning his wife and mother-in-law. Antimony was the agent employed; and no doubt the money which would accrue from assurance offices, in the event of the victim's death, was the main motive that prompted the crime. He, too, was executed.

Aconitin was the poison used by Dr. Lamson to compass the death of Percy Malcolm John, his wife's brother. He effected his design by inducing the boy to swallow a gelatin capsule filled with powdered sugar into which he had introduced the poison, on the pretense that it would relieve the paralysis from which he suffered. The same night the lad was seized with violent pains, and died within four hours of swallowing the capsule. Suspicion fell on Lamson, and he was arrested and sentenced to death.

Jealousy of a successful rival drove Dr. Eustachy, practicing at Pertuis, in the south of France, to attempt the life of Dr. Fournatoire. The latter one day received a present of six thrushes. Of these his wife and the cook partook, and were at once seized with excruciating pains, which were followed by extraordinary hallucinations and delusions. Dr. Fournatoire promptly subjected the remaining thrushes to examination and found them to contain atropin. Eustachy was sentenced to eight years' hard labor.

Dr. de la Pommerais, a homeopathic doctor, practicing in Paris, having in 1861 poisoned Mme. Dubiny, his mother-in-law, proceeded to insure a Mme. de Pauw, the widow of an old friend, for something over $100,000. This effected, he deliberately did her to death, using digitalin, to accomplish his purpose. His guilt was incontestably proved, and he suffered on the guillotine. Another French physician—Dr. Castaing—used acetate of morphin to remove the brothers Hippolyte and Auguste Ballet, that he might possess himself of their fortunes.

Perhaps the most callous of medical

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criminals was "Dr." Thomas Neill, alias Cream, an American M. D., who was executed for the murder by strychnin of Matilda Clover, besides being accused of the murder of three other women.

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### DUTCH SUPERSTITIONS.

A writer in *Janus* contributes a series of interesting articles on Dutch Superstitions and Folk Lore, from which we learn that a great many of the popular beliefs current in Holland today are of very ancient date, and moreover are very similar to those found in other countries. For instance, the old saying that children could not be born till the coming in of the tide is in full force among the inhabitants along the Dutch coast, and the virtues of a child's caul are still an article of faith, while the numerous ways of foretelling the sex of the unborn child, which are common among Dutch mothers, have been in use for many centuries among the women of other nations.

The idea that if the face of the expectant mother is free from spots she will give birth to a son comes down from the Greeks and Romans, and the belief that the time of the preceding child's birth determined the sex of the coming one is still common in Ireland and the Ardennes, where it is yet believed that a son will be born if his elder brother or sister came to this great stage of fools when the moon was on the increase, and a daughter if it arrived when the moon was on the wane.

Another ancient method, still in use among the Malays of Sumatra, of settling the sex question, is for the mother, at the commencement of milk secretion, to drop some milk into a little water. If the milk dissolves immediately, she may expect a girl baby, but if it remains as it is for a little while, she will be delivered of a son. If the child dies before it is weaned, the flow of milk is stopped by laying its little shirt on the mother's breast, a practice still found in Hungary.

There are all sorts of ways to cure sore and inflamed nipples. Some take the form of plasters and ointments, such as the leaves of a white lily soaked in brandy, lily bulbs which have been standing in oil, or an embrocation made of fœnum græcum, a medicine which was well known to the ancients, and is mentioned by Dioscorides and other old writers. There are other and ruder methods, however, which are regarded as equally efficacious, such as the application of hemp drenched in tar, of a newly worn woolen nightcap of the husband's a wet dish-cloth, or even a young dog which had been cut open while still alive and laid upon the woman's breasts.

All sorts of charms and superstitions still prevail in Holland with regard to the cure or prevention of different diseases and disorders. Headache, for example, is cured by the application of a slice of lemon peel, or raw potato, a piece of red cabbage or even of tin-foil to the temples; while he who never cuts his nails except upon a Friday hides them in a hole in a hollow tree, carries a cow's tooth in his pocket, a bag of indigo or hempseed in his hat, or a fresh sheep's spleen in his nightcap is considered immune from this distressing complaint. Mistletoe which has grown upon an oak tree, and has been infused in red wine, is a sovereign remedy for apoplexy, convulsions, worms, lameness and epilepsy. The last named disease is still treated as it was in the Middle Ages, with human blood, elk's claw, crab's eye, peony root, linden blossom, rue and the placenta of a first birth, all of which are likewise used for any kind of fits. Another remedy is for the patient to eat the heart of a mole, a roasted mouse, or to drink the blood of a white duck, while eggs which have been laid on Maundy Thursday and are beaten up

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with the shell, are efficacious not only in cases of falling sickness, but also of cancer.

The ancient faith in the Three Kings as protectors against epilepsy is still very strong. Another means of preventing epileptic attacks is never to eat flesh from the head of any animal, while in Limburg and Brabant it is quite common to find people wearing the prayer of Charles V. as a charm against this disease. This prayer, the original of which was found on the Holy Sepulchre at Jerusalem, is said to have been sent to the Emperor by the Pope as a safeguard in war. The magpie is considered most efficacious not only in cases of epilepsy but also for gout in the joints, madness, melancholia and diseases of the eye. The latter are likewise cured by the application of saliva (some forty years ago dogs were used to lick diseased eyes, a practice happily gone out), urine, and woman's milk, as well as by different kinds of water, such as March snow-water, dew gathered on Christmas night and the water from Lourdes and other holy wells.

Water from the well of St. Willebrord, near Heiloo, in North Brabant, is especially efficacious when drawn before seven o'clock in the morning, and its healing properties are at their best on Maundy Thursday. Infusions of celandine, chickweed and speedwell are also largely used for eye troubles. Boiled mouse is regarded as a cure for enuresis; it is mentioned by Pliny, who says, *"Urina infantium cohibetur muribus elixis in cibo dates."* Another cure for the same complaint is the taking of Porcellio scaber, which the ruder Dutchmen vulgarly call "piss-a-bed," in porridge.

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### WHO HAS THE BABY?

A doctor's wife, in a communication to *The Mirror,* puts in a strong and timely word for the part which "mere man" plays in the birth of the baby. Referring to an editorial in *The Mirror* in which Dr. Eliot was taken to task for his "baby every two years" advice, on the ground that Dr. Eliot is a man, and men don't have to "have babies," this correspondent says:

"That was a great stroke, your comment on President Eliot's idea of a baby every two years for women. Your women readers all settled back most complacently, self-satisfied, I know, on reading it, but—the men *do* have the babies.

"From the very beginning of the order for a baby, the husband's martyrdom begins. He must never lose his temper. He must be all gentleness, all patience. Wife must not be worried while she is busy with her baby. It may be her soul is no larger than a pin-head, she may be a naturally born nagger, yet she is not expected to try to overcome it. She is allowed to revel in all her petty tempers and meannesses. The hired girls may leave, the rest of the family retire to solitude, but father must stand by, for isn't he the *cause* of it all?

"Who is it has nervous prostration, all by himself with no coddling, when the baby comes? Father. It isn't all a joke, the little facetious local notice, 'Father is doing well.' In the ladies' magazines, father is out on the lawn smoking like a burnt-out bonfire, or pacing the gallery, only stopping to inquire if all is well, but in real life father is on the spot, helping the doctor, cussing the nurse and encouraging and soothing the wife. In a few days, wife and baby, beruffled, beribboned and sacheted, are blissfully receiving admiring relatives and friends; nothing to do but just be congratulated on the wonder of wonders. Father gets some good-natured chaffing and cuts an extra hole in his galluses, hitches up a little tighter and goes on 'having the baby' until she is grown, educated and married or until son has been saved from the penitentiary

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a time or two and is finally landed at some business that will pay his board and clothe him. No one ever hears of father reneging on the number of babies. Each new one is the finest yet. Let someone design a maternity medal for dear old dad.

"P. S.—Being a doctor's wife, I couldn't write this without the obstetrics, but you will get my meaning I know."

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## MANAGING PATIENTS.

By C. N. Johnson, M. A., L. D. S., D. D. S., Chicago, Ill., in the *Dental Era.*

[Although this article is written by a dentist for dentists, it applies equally to physicians. One only has to substitute the name and work of the doctor for that of the dentist to make it a practical sermon to the medical man.]

### The Management of Children.

To be successful in the management of children means a great deal in the maintenance of a satisfactory and permanent practice. The children of today make the patients of a few years hence, and if a practitioner has the tact and patience to control children from the time they first come to him till they grow to years of accountability he can then have a class of practice built upon the lines of his own choosing and of a character to harmonize best with his individual preference. There is nothing more interesting in life than to watch the development of a child and study the various manifestations of character-building as exemplified in their attitude towards one with whom they are brought into close relationship as the dentist. Child study is always instructive, and it is doubly so when conducted from the point of view of a professional association. The dentist should early aim to understand his little patients, to gain their confidence and enlist their sympathy with whatever he attempts to accomplish for them. If he really loves children and always treats them in a frank and cordial manner, he will in turn receive at their hands a reciprocal attachment which eventually will prove one of the greatest inspirations to high professional endeavor. The implicit confidence of a child is no small thing to attain, and he who has this is not altogether bereft of satisfaction in the conduct of his affairs.

The first thing to learn in the management of children is not to deceive them. He should aim to avoid giving pain to a child whenever possible; but if it is found necessary to inflict pain in an operation, the child should never be promised that there will be no pain. The magnitude of the hurt must of course not be exaggerated in advance. In fact, it is best ordinarily to make light of it and place the best possible construction on it. It is usually well to say to the child that the dentist can not always tell precisely whether an operation will hurt or not, but that if it does hurt a little, the child may be sure that the dentist will be very careful about it and not hurt in the slightest degree more than is necessary. But to promise that it shall not hurt, and thereby gain the little patient's consent to an operation which in the nature of it must give pain, is an abominable subterfuge which reacts on the dentist and raises a suspicion in the child's mind which subsequent years are powerless to efface. Different children require different methods to manage them, and with some especially obstinate and unreasonable children it may at times be necessary to employ force in accomplishing the end, but ordinarily a little tact will win the day. With most children an adroit appeal to their manhood or womanhood will work marvels. The child-mind is wonderfully susceptible to praise and encouragement, and a word which touches their pride will go far towards nerving them up to an operation.

No attitude should ever be taken to-

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ward a child except one of extreme kindness. Even if it becomes necessary to coerce a child into an operation, it should be done in the kindliest manner, and never with a display of temper; and if an issue has arisen whereby the child has been compelled to submit against his will, the dentist should take great pains to so soothe his feelings subsequently by a kindly encouraging interest in his welfare that the child will leave the office without harboring any resentment. It is sometimes astonishing how a stubborn child will yield to a gentle reasoning and a cordial show of kindness. immediately following a contention in which the dentist has come out master of the situation. Kindness is very soothing under these circumstances, and it also proves to the child that, after all, the dentist is a good friend, and if he does hurt, it is only because of necessity and solely for the patients' good.

But it is best if possible to avoid giving much pain to children. Usually palliative measures are preferable when even they can be made effective, particularly till the little patient has grown accustomed to the dentist and has been led up by a skillful system of management to the point where a reasonable amount of pain will be tolerated without protest. The first visit of a child to the office is usually a momentous occasion, and except the most urgent necessity no pain should ever be given at this time. The child, if timid, should be entertained in such a way that so far as the personal element is concerned there is no fear. It is frequently well to make the first examination without putting the little tot in the chair, and if the child is very young, it is usually best to have the mother or nurse hold it in her lap. Then when the first mere glance is had something complimentary should be said, and if the child is not too timid he should pat the little round cheek in a friendly way, and the ice is broken once for all so far as that child is concerned. The gentle touch of the human hand has a wonderful effect on a child, and a demonstrated tenderness on the part of the dentist at this first visit influences largely his subsequent success with the little patient.

It is sometimes marvelous what children will bear in the way of pain without protest if perfect confidence has been established and an appeal is made to their pride. A case in point is worth recording as illustrative of what may be accomplished with an apparently wayward child by a little tact. A lady walked into the writer's office one day leading a crying child. The little girl was in the saddest distress imaginable, and the mother was out of sorts and irritated by the evident contention over the visit. Said the mother: "Doctor, I don't know whether you can do anything with this child or not; but she has worn us all out with the toothache, I have finally forced her to come and see if you can stop the pain. She is the most wayward child I ever saw, and I am utterly exhausted with her."

I saw at a glance that the case between the mother and the child was in its acute stage, and that counter-irritation was not indicated for either. I approached the little girl, and said, gently: "Well, dearie, let me see what the trouble is." Instantly she dropped her mother's hand and looked up at me with such an expression of relief and confidence on that little tearful face of hers that I said: "Why bless your heart, you and I are not going to have any difficulty, are we?"

"Well," the mother snapped out impetuously, "if you can manage her, you are the first one I ever saw who could. She's the —"

But I stopped her with a gesture, and asked her if she had some shopping to do or anything to occupy her for the

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next half-hour. She was quick-witted enough to take the hint, and I soon had the little girl to myself in the office. The moment the mother was out of the the room the tears began to dry and sobbing to cease, and in a very few minutes the little patient was perched up in the chair showing me the tooth that ached. She was one of those delicate, sensitive, high-strung little creatures, susceptible to kindly treatment, but instantly rebellious against anything harsh, and, unfortunately, mother and child did not understand each other. I treated her with utmost tenderness and managed to relieve the pain with little discomfort. By the time the mother returned she was the brightest little midget imaginable, and the mother said: "Dear me, I guess you have hypnotized her. I never saw her take to anyone like that before." I told her that all the hypnotism I had used on the child was kindness, and I even ventured to suggest that she experiment on her little daughter in the same way and watch the result.

It became necessary to have many sittings with the child subsequently, and as her teeth were extremely sensitive, some of these sittings were painful, but never at any time did I hear a protest from her, nor was she ever reluctant to take the chair. I have seen her sit through an operation when at times the tears would course down her cheeks, and my only answer upon expressing sympathy for her was a bright smile bursting through the tears. What a wondrous mentality there is wrapped up in a sensitive child, and what a sacred trust it is for those to whom the care of such children is committed that they study carefully the myriad mainsprings of motive behind every act and thereby learn to bring out the best there is in this tiny "bundle of possibilities."

To the dentist it is given to accomplish great good with such children on account of the close relationship existing between patient and practitioner; and no man can make a careful and continued observation of child-life in this connection without thereby being made vastly better himself. The results will repay a thousand times for the effort.

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## ELIMINATION OF REFRACTIVE ERRORS.

As stated, every condition of ametropia is inherently attended by muscular imbalance, hence by the time the patient comes to the refractionist a part of the muscular trouble has become permanent, due to anatomical changes in the muscle, and a part of it is still an integral factor in the ametropia. After testing the amount of imbalance in the unaided eye, therefore, the operator should correct the error of refraction with appropriate lenses, and make another test, subtracting the result of the second test from that of the first to find the net amount of permanent imbalance which needs treatment.

### Treatment of Imbalance.

If the degree of hetrophoria is slight it is usually sufficient to correct the error of refraction, and when this cause of the trouble is removed the muscle will right itself. In severer cases, however, a course of optic exercises must be carried out, with prisms base in or base out as the case may demand, and as indicated by what has already been said. These exercises should be nicely graduated, and carefully supervised by the refractionist, and need to be persisted in with great constancy and patience. In cases of convergent imbalance the results are usually very satisfactory; in divergent imbalance they are less encouraging as there is no known stimulus for the unilateral contraction of the external rectus.

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# REFRACTION.

## STRABISMUS AND IMBALANCE.

### Strabismus.

STRABISMUS is that condition of the eyes in which the yellow spots are not directed toward the same point in the object viewed. When the lines along which they are directed diverge from one another, the condition is called divergent strabismus; when they converge toward each other, it is called convergent strabismus. In both cases there is double vision; in the latter variety there is direct double vision, i. e., the image seen by each eye appears to be on the same side as the eye perceiving it. In the former variety there is crossed double vision, i. e., the image seen by each eye appears to be on the opposite side from the eye which perceives it. This is easily diagnosed by mounting a colored glass before one eye and observing which image appears colored.

Strabismus is real or apparent.

Apparent strabismus is the effect of a disturbance in the relationship between the optic and visual axes, due to hypermetropia or myopia. The optic axis is a line drawn through the nodal point of the eye to the center of the cornea; the visual axis is a line drawn from the object viewed through the nodal point to the yellow spot. The angle made by these two lines is called the angle alpha, and in the normal eye is about 5°.

### The Angle Alpha.

In myopia the nodal point is relatively further back than in the normal eye, and the angle alpha is thereby enlarged. This, by a confusion of judgment in the observer between the optic and visual axes, gives the patient the appearance of having a divergent strabismus. In hypermetropia the nodal point is relatively further forward than normal, and the angle alpha is diminished, sometimes completely obliterated, and occasionally the two axes cross, in which case the angle alpha is said to be negative. This gives the patient the appearance of having a convergent strabismus.

It is of course highly important to be able to determine whether a given case of strabismus is real or apparent, and fortunately this is very easily ascertained. We simply hold an object, such as a pencil, about a meter from the patient's eyes, directing him to keep looking at it, and gradually move it nearer to his eyes. If both visual axes continue to be directed toward the object the case is one of apparent strabismus. But if during the experiment one eye suddenly deviates, either inward or outward, then we have a case of real strabismus, which must then be diagnosed by further means.

Real strabismus is due to a defect in the function of the recti muscles of the eye, and may be generally classified into Concomitant and Paralytic strabismus. Properly speaking, these two varieties are but different degrees of the same trouble, but for practical purposes we recognize as concomitant strabismus those cases in which the deviation of the squinting eye is constant, and its range of motion is practically equal to that of the sound eye, while by paralytic strabismus we understand a condition in which the paralysis of the recti is such as to seriously interfere with motion of the deviating eye.

### Diagnosis of Strabismus.

In some cases it is possible to determine roughly between concomitant and paralytic strabismus, by simply having the patient follow with his eyes a small object moved in various directions, and observing whether or not the deviating eye follows the motions of the sound

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one. But this is not at all a reliable test. The only trustworthy way of diagnosing the nature of the squint is as follows:

First instructing the patient to look straight in front of him, make a mark on the lower eyelid with a piece of crayon indicating the position of the pupillary center in each eye.

Now cover one eye in such a manner as to obstruct the patient's view, but so that the observer can watch the movements of the covered eye. Instruct the patient to look steadily with his uncovered eye at a small object held a short distance from him. (This is called "fixing" the object.) The covered eye will be seen to make a sudden movement inward or outward, and the extent of this movement should be indicated by another chalk mark on the eyelid.

Now cover the other eye and repeat the experiment. If the deviating movements made by the two eyes, as indicated by the chalk marks, are equal, the strabismus is concomitant. If one eye made a greater deviation than the other, the strabismus is paralytic, and that eye which made the greater deviation is the sound eye.

The deviation made by the squinting eye in this experiment is called the primary deviation, that made by the sound eye the secondary deviation, and the law is that in concomitant strabismus the primary and secondary deviations are equal; while in paralytic strabismus the secondary deviation is greater than the primary.

Paralytic strabismus is of course a matter for the neurologist to deal with, and need not be considered in a work on optics. By far the greater proportion of cases of concomitant strabismus, however, are due to errors of refraction, high degrees of hypermetropia or myopia, and are therefore legitimate subjects for the optician.

**Treatment of Strabismus.**

In recent cases, and in cases of what is called periodic strabismus, i. e., where the squint appears only under the strain of near vision or at times of great bodily fatigue, the proper correction of the refractive error and resting the eyes from near work is often sufficient to effect a cure. In more permanent cases it is frequently necessary to give the patient prolonged rest for his eyes by means of atropin, say three or four weeks.

In divergent strabismus much good may sometimes be accomplished by orthoptic exercises by means of prisms, for particulars of which, however, a larger work must be consulted. Such treatment requires great patience and judgment, and should not be carried out by one who does not thoroughly understand the anatomy and physiology of the matter. For convergent strabismus no exercises of this kind are serviceable, as there is no known means of exciting the external recti to contraction.

If none of these expedients succeed the case becomes one for the ocular surgeon.

**Muscular Imbalance.**

Of much more frequent occurrence than actual strabismus is the condition of latent deviation known as muscular imbalance, or heterophoria, in which one of the extrinsic muscles of the eye has, from some cause or other, become less efficient than its antagonist, necessitating an excessive innervation of the weaker muscle in order to prevent deviation, and giving rise to what is known as eye-strain, with occasional lapses into periodic strabismus.

**Varieties of Heterophoria.**

According to the direction in which the eye tends to deviate, heterophoria has been divided into three general classes, dependent, of course, upon insufficiency of the muscle acting in the opposite direction, as follows:

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**Variety.**
Exophoria
Esophoria
Hyperophoria
**Tendency.**
Outward
Inward
Upward
**Faulty Muscle.**
Internal Rectus
External Rectus
Obliques.

Inasmuch, however, as this classification involvees an inversion of the nomenclature of the condition and the muscle at fault, it is not a very convenient one, and the writer much prefers Gould's method of designating the trouble by the term "imbalance" of the muscle in question.

Of the above varieties of imbalance the last is so rare that it will be disregarded in the present work.

**Causes of Imbalance.**

The muscular insufficiency may be due to a general lack of muscular or nervous tone, whose underlying cause is to be found in some constitutional disease, such as tuberculosis, syphilis, anemia, neurasthenia, etc. Far more commonly, however, it is a result of long-continued error of refraction, involving an extraordinary disturbance of the normal relations between accommodation and convergence. In fact, every condition of ametropia inevitably and logically produces muscular imbalance, and it is simply a question of the degree in which it exists, ranging all the way from imperceptible heterophoria to actual strabismus.

**Rationale of Refractive Imbalance.**

It has already been explained that, while accommodation and convergence are anatomically distinct and separate functions, they are very intimately associated, and the exercise of one is a powerful stimulus to the performance of the other. Hence when, as in hypermetropia or myopia, the normal relation between the two functions is disturbed by the abnormal conditions of accommodation, the natural tendency of convergence is to follow suit, and it is only prevented from doing so by an excessive innervation of the muscle concerned in such prevention.

Thus, a hypermetrope, as we have seen, is obliged to use his accommodation for objects at infinity, and when he does so the natural tendency of the internal recti is to contract and converge the eyes in proportion to the degree of accommodation exerted. But if this were done, convergence for distant vision would result, whereas the imperative desire of the brain is for single vision. Therefore an extraordinary innervation is applied to the external recti to prevent convergence.

A myope, on the other hand, does not accommodate for near objects, which nevertheless demand convergence in order to produce a single image. The normal stimulus to the internal recti is here lacking, and the external recti are naturally stimulated tc contract in correspondence with the negative accommodation. An excessive innervation is therefore necessary to bring the internal recti into adequate play.

**Muscular Failure.**

In both of these conditions, if long continued and the eyes constantly used, the overworked muscle eventually becomes weakened, and there is a latent deviation toward the direction of its antagonist, which is only prevented by an increasing conscious effort which at times (especially under strain of bodily fatigue) fails, and temporary strabismus occurs. In hypermetropic imbalance (by far the commonest type) it is the external recti that suffer and the tendency is to convergence; in myopic imbalance the internal recti are overworked, and the tendency is to divergence.

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**Distinction Between Imbalance and Strabismus.**

Eventually, of course, imbalance, if not relieved, will end in strabismus, which is functionally only an intenser degree of heterophoria. The practical difference between the two conditions is that in imbalance the brain is, by an effort, maintaining single vision at the expense of the muscle, whereas in strabismus the muscle is no longer able to maintain proper poise; single vision is then impossible, therefore the brain has ceased to strive for it, but fixes the object with one eye or the other, disregarding the image on the unused eye.

**Tests for Imbalance.**

These are, in the gross, the same as those already given for strabismus, dependent upon the inability of the affected eye to accurately follow the convergent movements of the sound eye.

**Maddox Rod.**

A much more delicate and reliable test, however, is that furnished by the Maddox rod found in every trial case. This device is an opaque disc into which is set a cylindrical piece of colored glass, which is mounted before the suspected eye, the other eye being left uncovered, and the patient instructed to look at a small flame six meters away.

The principle of the Maddox Test is that the image of the flame on the uncovered eye is that of a round white flame, while on the covered eye it is drawn out in to a long bar of colored light, thus dissociating the retinal conceptions of the image and lessening the desire for single vision.

If the muscles are in perfect balance the images on the two retinae will accord without effort and irrespective of the identity or difference of their form, and the round white flame will be seen with the rod of colored light running through it.

If there is muscular imbalance, the dissociation of the retinal images and the consequent weakening of the desire for single vision will induce the patient to give up his effort to preserve the single image; double vision will at once result, and the rod of colored light will be seen to one side of the white flame—on the same side as the covered eye if the imbalance is convergent, on the opposite side if divergent.

**Use of the Maddox Rod.**

It is important that the disc containing the Maddox rod be placed exactly in front of the patient's pupil, otherwise it will entirely fail of its effect. It must also be remembered that as the rod is a cylinder it will draw out the flame into a bar precisely at right angles to the axis of the rod, and must therefore be placed before the eye at right angles to the direction in which it is desired that the bar of light shall appear. In testing for convergent and divergent imbalance (the only two varieties here considered), it is desirable to have the rod appear vertical, hence the rod should be placed horizontally. In testing for hyperophoria, or imbalance of the obliques, the reverse is desirable. This form of imbalance, however, is rare, and has no direct relation to refraction.

**Prism Test.**

In cases of bilateral muscular insufficiency, which, of course, can hardly be regarded as imbalance, since both eyes are alike affected, the insufficiency is detected and measured by means of prisms, as described under Convergence.

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**WHERE SHE TRIPPED.**

A young man went into a store to buy a fountain pen. The young saleswoman gave him one to try, and he covered several sheets of paper with the Latin expression "Tempus Fugit," which means "time flies."

The obliging saleswoman offered him another pen. "Perhaps," she said, "you'd like one of these stubs better, Mr. Fugit."

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# THE SICK ROOM.

## A MOUTH COOLER.

MAX ROBITSCHEK, in *Wiener Med. Wochenschrift,* describes how, during a siege of typhoid fever, he experienced the torture of dry mouth, which is apt to occur in a patient suffering from a high fever. He found out how powerless our therapy is in the presence of this sensation of heat in the buccal mucosa with the dry tongue. Neither brushing with glycerin (disgusting with its sweetish taste) nor pieces of ice, nor cleansing the mouth with a menthol-perhydrol mouth wash, nor a decoction of althea root is able to give relief for even a few minutes after their immediate use. The same may be said of gargles with ice-cold mineral or soda water, which is the best tasting of all the other remedies. What severely sick patient has strength enough to sit up and gargle continually and then spit it out into some vessel? With what exhaustion he sinks back upon his pillows, only to attempt again, by the nurse's aid, to relieve himself with the cooling liquid from the wretched sensation in his mouth.

Thus the author suffered and thus suffer many patients, though not all, and not all as intensely in every sickness; but almost always where there is an abnormally high temperature, and most so in infectious diseases, such as sepsis, typhoid fever and tuberculosis, also in poisoning, and after operations under narcosis.

Dr. Robitschek therefore devised a mouth cooler which fills a need in the therapy at the bedside, and so its construction will be described here.

The instrument consists of a flattened tube of hard glass bent upon itself and shaped so as to follow the outline of the tongue and provided with a handle. The two open ends are shaped for the easy and safe attachment of soft-rubber tubes, the one tube to be attached with one end to one end of the instrument and with its other end to a water-reservoir, and the other soft-rubber tube is attached to the other end of the instrument, and its other end left to empty the flowing water into a vessel on the floor. The water is to be kept at a temperature of 50 degrees F. (Various improvements in the bending of the ends of the glass tube will suggest themselves. So, too, the connection of the rubber tube with suitable vessel as a reservoir by means of a glass siphon; a rubber bulb being inserted in the rubber tube to start the stream would be another improvement.)

The hard glass is best for the tube on the score of cleanliness and absence of taste in the mouth. An attempt to crush it with the teeth resulted negatively. It can be made of course of any metal, and nickel plated. It is made of two sizes, suitable for adults and children.

The instrument should be sterilized by boiling before being put into the mouth, which the patient is left to do himself, and his attention should be called to the fact that the contrivance will not only cool his tongue, lips and palate, but the mucosa of the cheeks also.

The mouth cooler can be kept in place if necessary by means of tapes tied to either limb of the instrument, the free ends being pinned to the pillow with a safety pin. The attempt to fix the mouth cooler in place by fastening it like spectacles behind the ears provokes nausea and is therefore undesirable.

The simplicity of the instrument enhances its usefulness. Patients use it gladly and are full of its praise. No complaints were ever heard of its interfering with the teeth, which would

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theoretically suggest itself. But there seems to be a great difference between rinsing the mouth with cold water, which comes in touch with all the teeth, and this mouth cooler, which touches the chewing surfaces of only four teeth. Patients with carious teeth who could not use cold gargles on account of provoking toothache have made no objection to the mouth cooler.

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### WHY SOAP CLEANSES.

*La Technique Moderne* gives some interesting details concerning the researches of one M. W. Spring, a Belgian chemist, into the processes whereby soap cleanses. It has been stated that the cleansing properties of soap are due to its combination with the soiling substance, but this only half explains the question as to how soap acts. An explanation is still required as to why it disappears after having taken up and entered into combination with the dirt, or, in other words, why the compound is removed. The author, after studying the action of soap upon various soiling substances, such as lampblack, clay, red chalk, silica, cellulose, etc., comes to the conclusion that the cleansing of an object consists in a process of substitution. There is brought about a colloidal combination of the soap and the soiling substance, which by reason of its constitution, no longer has the power of fixing itself by absorption on to the solid body, with the result that it is easily carried away by the water. Thus in washing with soap one puts it in contact with one's soiling substances, these latter having a greater affinity for the former than for one's skin. The process does not end here, for soap in its turn has even a greater affinity for one's skin than for the substances which it proceeds to replace and to set free to be taken up by the water and removed. The dirty substances have a chemical action on the fresh solution of soap and water, resulting in the formation of an acid salt, with which they agglutinate themselves. This compound of coloidal absorption is due to electrical action. The constituents have different electrical polarities. The compound is stable and can pass through a filter-paper without soiling it.

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### DISINFECTION OF THE HANDS.

The *British Medical Journal* comments upon the extraordinary large number of methods of disinfecting hands for surgical purposes which have come into use during the past few years. H. Selter holds that among all the methods those which depend on the action of alcohol are destined to play the chief part. The work of Ahlfeld on this subject is said to prove this. Fürbringer's method is also a good one. It consists in washing the hands in hot water with a nail-brush for five minutes, then washing in alcohol for a further five minutes, and finally disinfecting in a 1-per-cent solution of perchloride of mercury for two minutes. Ahlfeld's method is to wash the hands in hot water with a brush for from five to ten minutes, then to dry them, then to treat them by scrubbing them in concentrated alcohol for three minutes, and, lastly, washing them for two further minutes with a flannel dipped in absolute alcohol.

The two methods have, in Selter's opinion, certain disadvantages. First, a considerable time is taken up in the disinfection; and, secondly, the quantity of alcohol required for the process is cumbersome to carry about and costly. He first determined to compare the value of the various methods when tested by Klap and Doitz's method. Washing and subsequent disinfection with lysol or perchloride yielded unsatisfactory results. Fürbringer's, or other alcohol methods, diminished the number of bacteria very considerably, and the results were equally good with absolute alcohol, denatured spirit or soap dirt. Tannin

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alcohol produced good results on the surface, but failed in a deeper action.

In order to overcome the disadvantage of carrying a large quantity of alcohol about, the author had an ointment prepared, consisting of 75 per cent alcohol and 25 per cent potassium soap. This could be put up in collapsible tubes. First the hands were washed with soap, cold water, and nail-brush, and special attention paid to the cleaning of the nails; then 5 Gm. of the ointment was rubbed well into the hands until quite dry, and again 5 grams twice, so that at least 15 grams of ointment would be used. The whole process occupied about five minutes. The hands were then rinsed with sterile water or perchloride of mercury solution.

The tests showed that 15 grams of ointment secured a diminution of the number of bacteria by over 99 per cent of the original number. During hot weather it appeared, however, that this ointment failed; the alcohol separated spontaneously from the soap. He thereupon prepared a paste, containing 80 per cent alcohol and 20 per cent soap, gained from pure palmitic and stearic acids. The results were as good as those with the ointment. More recently he succeeded in making a paste with 86 per cent alcohol, with which the results were still better. He claims from his investigations that the disinfection gained with 20 grams of the paste are as good as that obtained with 150 Cc. absolute alcohol.

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### SWEETS FOR CHILDREN.

A very strong craving for candy and other things which consist largely of cane sugar in a child of four years indicates that the child is a very natural child. Children all like sweet things. It is perfectly natural that they should, because a child needs a great amount of heat-making material. Carbohydrates—starch and sugar—are material out of which the body makes heat. They are fuel for the body. A child requires more fuel in proportion to its size than an adult does. Here is a boy who weighs thirty pounds, and he has perhaps ten square feet of skin surface. And here is a man who weighs 180 pounds, and he has twenty-one square feet of skin surface. He weighs six times as much as the boy, whereas his skin surface is not much more than twice as much as the boy's.

It is to keep the skin warm that we eat, chiefly, for the heat is radiated from the surface of the body, and the larger the skin surface, the more the radiation; so a child has to eat very much more in proportion to its size than an adult does, because it has a larger skin surface. And so children have a natural craving for sweet things, have what is called a sweet tooth. But sweets should be given to children with great discretion. They should be used only at meal time and with other food. The use of too much refined sugar should be avoided, and if the plain molasses could be used instead of syrups, chemically refined, the effect would be laxative instead of constipating and good and not evil would follow.

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### SUGAR IN INFANT FEEDING.

Strange as it may seem, as the *Healthy Home* points out, pure food, and often apparently suitable food, sometimes makes baby sick. In other words, when certain conditions arise even food which ordinarily would be just the thing causes irritation of the intestinal tract.

There is a definite tolerance of the body for any food, a quantity below which such food is beneficial, and above which it acts as a poison.

A good authority declares that milk sugar is the element in milk which is hard for the baby to tolerate. The normal amount which the average baby can stand is one to one and one-half grams of sugar to each pound of baby a day;

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in other words an eight-pound baby might take twelve grams.

In certain cases of cholera infantum this tolerance is lowered to even a hundredth part of this amount, so that milk sugar in these cases actually acts as a poison even in moderate amounts. In the summer time, especially, a slight over-stepping of the sugar tolerance causes a mild cholera; a great overstepping causes cholera infantum.

Much information regarding this food question has been derived from experiments with animals, particularly with puppies. An increase in the amount of milk sugar given causes an increase in weight of the pups until the limit of tolerance is overstepped. After that the animal rapidly loses ground. We have the same effect with the child; the food which under normal conditions nourishes, becomes a poison if given in excess.

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### WHEN A CHILD HAS HEADACHE.

The child told of in Old Testament Scriptiure, restored by Elisha the prophet, gave first intimation of his sickness by crying out, "My head, my head!" And many another child has first manifested to his parents the onset of some disease by a similar exclamation.

Headache nearly always accompanies a rise in temperature known as a fever. The cause may be trivial, like indigestion, or a common cold, or overexertion; or it may be quite serious as when scarlet fever, measles or some other infectious disease is a work; or the cause may be obscure or possibly alarming, especially if the headache is not accompanied by fever. For instance, given a temperature under 103 degrees F., headache is rarely present in children unless there is disease of the brain or the meninges. Under such circumstances it is likely to be more or less persistent and intense. When entirely due to a rise in the temperature, headache is usually greatly relieved by pressure over the temples, by the application of cold to the head, and by massage of the veins of the neck. On the other hand, active motion causes an increase in the pain. It is true of all feverish conditions in children that they are usually associated with some degree of headache.

Soreness of the scalp arising from rheumatism, the arrangement of the hair or other similar trifling cause should never be mistaken for headache, although the child may sometimes so name it.

Aside from the infectious diseases the great proportion of headaches are the result of food poisoning caused by constipation or over-feeding and are relieved at once by free doses of castor oil.

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### DRINK IN ACUTE NEPHRITIS.

Unless dropsy is present, the patient may be given to drink freely of a beverage consisting of a dram or two of potassium bitartrate added to a pint of boiling water, flavored with lemon juice and a bit of lemon peel. The mixture should be allowed to cool before drinking.

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### A CRICK IN THE BACK.

Many people, says *The Healthy Home,* are not unfamiliar with the terrible pain, discomfort, and helplessness which follows a "crick in the back." This trouble, otherwise called lumbago, is about equally divided between men and women. There are a number of causes.

The most frequent causes, however, are rheumatism and the uric acid condition, and self poisoning from constipation. The latter cases (those from autointoxication) are readily controlled and improve very quickly in a few days after moderate doses of podophyllin or calomel, followed by liberal doses of saline cathartics.

Sometimes the trouble arises from specific infection and the rather indefinite thing which is named "taking cold."

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In people subject to the trouble, an unusual strain may be the immediate occasion, although the cause will probably be back much further.

People who have ascribed this affection and other pains in the back to kidney troubles, are as a rule mistaken. The patent medicine advertisements in which a man is limping about with his hands on his back and exclaiming, "Oh, my kidneys," is very misleading. As a matter of fact, the kidneys are not very richly supplied with nerves and do not give rise to severe pain even in some grave forms of kidney disease.

If the case is a severe one it is much better for the patient to go to bed, and recovery will be much quicker. A good liniment rubbed in before the fire several times a day is almost always a real help. Absorbine, Jr., long advertised in this paper, is one of the very best for this purpose. If the case persists and does not improve, it is always better to call a physician as there are sometimes complications that might need special medical treatment.

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### WARMING FOOD.

Keeping food warm and warming it quickly at odd moments are two of the nurse's most serious problems.

The small electric stoves are invaluable for this purpose. A completely equipped heater for water, tea, gruel, etc., costs five dollars. For those who use gas a most useful little contrivance known as the thrifty gas stove may be obtained. This fits over the gas-burner, but permits it to give light, utilizing the heat at the top of the flame. A cup, or small pan set upon the bracket, heats very quickly. This little gas stove costs forty cents. Thermos bottles have also won a permanent place in the sick-room. In these the water, milk or gruel is placed hot, and it is guaranteed to stay hot indefinitely. Thermos bottles cost from three dollars upward, according to size. A fireless cooker, which is a thermos bottle upon a larger scale, will keep an entire meal hot indefinitely.

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### DIET BEFORE SURGICAL OPERATIONS.

In preparing patients for an anæsthetic they are frequently given an unsuitable *kind* of food for the last meal. Thus healthy patients are sometimes made to swallow some concentrated meat essence at six o'clock a. m. This might be possible at lunch time, but the stomach is not accustomed to this kind of food at the earlier hour, and it will certainly resent it on a day of such anxiety. Besides, why should it be concentrated? A little extra water in the stomach can do no harm. If a patient be starved all night, and given nothing whatever by the mouth in the morning, he can still bring up fluid which would be at least as likely to choke him as the extra water.

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### A POLITICIAN.

On the morning of election a farmer came into Hiram Morse's blacksmith shop to have his horse shod.

"Purty busy this mornin', Bill?" inquired Morse, as he raked the embers together on the forge.

"Yep," answered Bill. "Hain't got hardly time ter go ter th' village an' vote."

"Wall, I'm putry busy myself," said Morse, casually. "I'll tell yer what we'll do," he added, after a moment's thought. "'Long's yer a Republican an' I'm a Democrat, we'll pair off, jest as they do in Congress, an' neither on us will vote. What do yer say?"

Bill agreed to the proposition, but after the election it was found that the blacksmith had paired off with every Republican customer who had come into the shop.—*Metropolitan Magazine.*

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# MEDICAL PHARMACY.

## THE RECIPES OF SIR KENELM DIGBY.

IN A RECENT issue of the *Chemist and Druggist,* X-rayser Il comments on the appearance of a reprint of an old book of recipes which several hundred years ago enjoyed a considerable vogue. "The new interest in old half-forgotten books," says he, "which has now become so general, is perhaps responsible for the publication of a dainty edition, which can scarcely be meant for students, of *The Closet of Sir Kenelm Digby Opened,* a work not previously reprinted, I believe, since 1677. Its recipes must be rather out of date for practical purposes; though the book is of much historical interest, for the pharmacist it is exceeded in this respect by the same good knight's *Choice and Experimental Receipts in Physick and Chirurgy,* published posthumously in 1668, with a dedicatory epistle by Digby's former assistant, Hartman, to George, Duke of Buckingham, the 'chymist, statesman, fiddler and buffoon,' of Dryden's satire."

This Sir Kenelm Digby was an interesting figure, who, in the time of James the First and of Charles the First, played many parts. He was born in 1603, the son of Sir Everard Digby, one of the malcontents implicated in the Gunpowder Plot, who paid the penalty for his misdirected political activity on the scaffold. Kenelm inherited a handsome income of three thousand pounds a year, but his enterprising and restless spirit would not allow him to enjoy his fortune in idleness, and we find him, when still a young man, at the court of James the First, indefatigably playing the courtier and seeking for an opportunity to display his talents. One of the gentlemanly employments of those days, and one attended with considerable profit provided the undertaker had luck, was to fit out privateers to prey on the treasure-ships of Spain; and England, having at that time one of its chronic misunderstandings with that country, with commercial rivalry at the bottom, young Kenelm requested the King to grant him a commission empowering him to sally forth on an enterprise of this kind. James, probably wearied by the importunities of his petitioner, consented. But, the story goes, a commission of this kind, in order to be in proper form, must bear the countersign of the Lord High Admiral, and that functionary was not in England. James, however, was resourceful in getting over little difficulties of this kind, and he granted the adventurous youth a special license for undertaking a voyage "for the improvement and increase of his knowledge."

Digby had luck. In the course of a year or two he captured a number of ships and showed his military prowess in the defeat of a number of French and Venetian vessels at Scanderoon, in the Levant. Upon his return to England he was knighted, and thereafter lived an active life, dabbling in politics, diplomacy, science, medicine and theology.

Digby is best known in the history of medicine (or, rather, quackery) for his "Sympathetic Powder," for which he claimed extraordinary virtues and which he described in a book bearing the title *Of the Cure of Wounds by the Powder of Sympathy,* published in 1658. He asserted that he had received the secret of this preparation from a Carmelite monk whom he had met at Florence in his travels on the Continent; and he is said to have lectured on the subject at the famous medical school of Montpelier in 1658.

This powder was used for the cure

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of wounds, and was applied, not to the injured part, but to the weapon with which the wound had been inflicted, this being sprinkled with the powder and dressed several times a day with an ointment, while the wound was simply washed and bandaged. The following curious story is told of how Digby first used the powder in England: It appears that Thomas Howel, the secretary of the notorious Duke of Buckingham, the favorite minister of Charles the Second, while endeavoring to act as peacemaker between two of his friends who had quarreled, suffered the usual penalty of those who undertake that function, and was so seriously wounded that the doctors who were called in consultation prognosticated gangrene. In this extremity the unfortunate secretary's friends appealed to Sir Kenelm, who told them to bring him a rag stained with the wounded man's blood. A garter soiled with blood from the wound was accordingly brought. This was placed in a basin of water in which a handful of the Sympathetic Powder was dissolved. Within an hour the patient was relieved of his pain and fever and a few days later was completely restored.

And what was the composition of this miracle-working preparation? In 1862, seventeen years after the knight's death, his erstwhile laboratory assistant, George Hartman, published a volume entitled *The Book of Chymical Secrets,* in which it was stated that the Sympathetic Powder was nothing but air- or sun-dried ferrous sulphate, partially purified by recrystallization of the crude salt! It may be remarked that Sir Digby had a theory to account for the operation of his powder. The rays of the sun, said he, drew from the blood and the vitriol the spirit of each. This spirit was in the form of minute corpuscles or atoms. From the inflamed wound there emanated a large number of hot atoms which (probably in consequence of the formation of a vortex) gave way to a current of air. The air, charged with the atoms of blood and vitriol, was therefore, attracted to the wound and exerted the curative action—how, we are not told.

Sir Kenelm left an extensive collection of recipes, many of which were treasured for many years after his death, and some of which probably survive to the present day in the half-superstitious medical practices of various rural communities. Their absurdity may be illustrated by a few examples: To cure toothache, scratch the gum with an iron nail until it bleeds, then drive the nail, with the blood upon it, into a wooden beam; the ache will disappear, and not come again. To stop bleeding of the nose, hold in the hand or wear in the hat a piece of the plant called "shepherd's purse." To cure epilepsy apply scraped peony root to the soles of the feet. There are many other bits of advice of the same kind.

Whether Sir Kenelm was a conscious imposter or whether he really believed in the efficacy of his prescriptions, is impossible to say. He has been as variously judged on this point as the famous Paracelsus, and had as many admirers and detractors. Among the latter were Evelyn, the diarist, who called him "an arrant mountebank," and Stubbes, who designated him "the very Pliny of the age for lying." However, among his rubbish are scattered some acute observations, and he is said to have been the first to notice the importance of oxygen to the growth of plants.

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### HYDROXY-CODEINE.

Hydroxy-codeine is a new alkaloid from opium, discovered by an Edinburgh concern, in the mother-liquors obtained in the working-up of the opium alkaloids. J. J. Dobbie and A. Lauder, in *Proceedings of the Chemical Society,*

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find that the alkaloid is a tertiary base with the formula $C_{18}H_{21}O_4N$. It is soluble in water and the usual organic solvents, but so far has not been obtained in the crystalline condition. It softens about 40°, and melts completely at 51°. It is slightly dextrorotatory, and contains one menthoxyl group. The hydrobromide crystallizes readily from water in large, hard, prismatic crystals. The alkaloid appears to be a hydroxy-derivative of codeine, its absorption-spectra agreeing very closely with those of codeine, and the colour-reactions of the two alkaloids are practically identical.

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### PREPARATIONS OF SULPHUR.

Following are the various preparations of sulphur which are used internally with their dosage:

Compound powder of glycyrrhiza, U. S. P.; dose, one heaping teaspoonful.

Confection of sulphur, B. P.; dose, one to two teaspoonfuls.

Sulphoalkaline powder, Bellvue Formulary; dose, one level tablespoonful.

Confection of senna and sulphur, British Pharmaceutical Codex; dose, one to two teaspoonfuls.

Compound sulphur pastil, British Pharmaceutical Codex.

Sulphur lozenge, B. P.—each lozenge contains five grains of precipitated sulphur. Dose, one to six lozenges.

Compound powder of sulphur, Berlin Formulary.

Sulphur lozenge, French Codex.

Compound confection of guaiacum (Chelsea pensioner), London Hospital Pharmacopœia. Dose, one to two drachms.

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### IDEAL OINTMENT BASE.

John A. Fordyce, New York, has found a mixture of the wool fat of the United States Pharmacopœia and ointment of rose water (cold cream) to yield an ideal ointment basis. The proportions of each ingredient may be varied to suit individual cases, but a mixture of one part of wool fat to three parts of cold cream would seem to be one that might be employed generally.

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### A QUININE-AND-STRYCHNINE MIXTURE.

A correspondent of the *Chemist and Druggist* writes that he dispensed the following mixture:

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|---|---|
| Quininæ hydrochloridi | gr. v. |
| Liquor strychninæ | mv. |
| Ammon. bromidi | gr. x. |
| Ext. digitalis liq. (P. D. & Co.) | mj. |
| Tinct. aurantii | mx. |
| Aquam ad | zj. |

Mitte zviij.

He found that the mixture crystallized all over the bottle, throwing out the digitalis, etc., and a deposit. Further, his customer has since had it made up in the City, and was informed that there was no deposit or any crystals on the sides of the bottle. (We find that it is exactly as "Epsilon" states: After twenty-four hours, or sometimes a little longer, there is a deposit of crystals on the sides of the bottle, and what he calls a throwing-out of the digitalis also appears to take place. These crystals, we find, contain no strychnine, but are simply a salt of quinine, probably either hydrobromide or hydrochloride, or a mixture of both. We have a difficulty in understanding why the crystallization should take place, seeing the solutions are fairly dilute; but we propose to look further into the matter, with a view to elucidating the cause of the trouble. We may say that the addition of 5 minims of dilute hydrobromic acid to the ounce gives a perfectly clear mixture; but it is doubtful whether this is allowable.)

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### DURET'S OINTMENT.

Precipitated sulphur, 8; coal tar, 15; wool fat, 32; are heated together for a short time at 130° C. When cool, camphor, 12; chaulmoogra oil, 3; yellow soft paraffin, 30, are incorporated.

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# ELECTRO-THERAPY.

EDITED BY NOBLE M. EBERHART, A. M., M. D.
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## UNIPOLAR ELECTRICAL CURRENTS

SAYS Charles M. Hazen, of Richmond, Va., in his address delivered before the Richmond Academy of Medicine:

Since the development of the static machine and the high power of transforming coils, it has become evident that the balance of therapeutic value is in favor of high voltage currents. These currents are, in the ordinary nomenclature, the static platform insulation, static wave, static induced, and static spark and spray; the high frequency spark, spray, vacuum tube, autoconduction and autocondensation. These names can be improved upon in behalf of a better description and classification.

The application of the above currents is the task of the modern electrotherapeutist. There is no hope or expectation that they are panaceas or that they will displace other methods that have proven valuable, such as drug treatment, hydrotherapy, etc.; but it is found that they are in certain cases specific, in others adjuvant, in others of no apparent use, and sometimes contraindicated.

Going back to the dictum, as to the stimulative and regulative value, the continuous unipolar static current—"static insulation"—is of value when the indication for the patient is general stimulation and regulation. The current permeates every tissue and cell of the body, stands the hair on end, warms, produces perspiration, raises blood-pressure, augments circulation and respiration; applied to a particular part, that part is especially stimulated and regulated. There is a general restoration of balance and as a rule, rest, quietude and sleep are the natural results. Such effects are plainly invaluable in nervous and metabolic disturbances.

The continuous, bipolar static current is, so far as I am aware, not mentioned in literature nor used by other operators than myself. It has been under experiment and trial for about two years and is one of the most valuable. I take this occasion to announce its method and applications.

What I have called the unipolar static current is applied with one plate connected with the chair of the patient or some part of his person; the return current to the other pole is through the air. The bipolar current is applied by two electrodes in contact with the patient, one from either pole. This is nothing more than the galvanic method, substituting the high-tension static current for the galvanic; and, as a rule, where in well established lines of treatment you read galvanic, you may safely and with far better results use continuous, bipolar static.

The effect of the galvanic is in many conditions valuable, but mild. The bipolar continuous static is much more effective on account of the higher electromotive force.

There are some mechanical advantages about this current; the metal electrodes do not have to be covered with sponge or cotton or moistened. On the other hand, the static machine sometimes loses its charge while the current is being given, especially the Holtz machine.

Without discussing in full the applications of the current, it may be said in illustration of its use that it is the great treatment from an electrical standpoint for nerve inflammations, such as sciatic and other neuritides, and nerve

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degenerations, such as occur in anterior poliomyelitis.

By way of caution, I would say that I have not so far as a rule, given this bipolar current in full to infants, but modify the treatment by using one pole, with return through the air, and still further modify it by having the nurse hold the child and thus get a part of the dosage. The results in a series of infantile spinal paralysis cases have been noteworthy.

The bipolar interrupted static current —"static induced"—may be mentioned next. It resembles, but surpasses in value the faradic current, and is used similarly for diagnosis and treatment.

Unipolar interrupted currents, with the variations which may (as I believe) be correctly included under this head, embrace every spark and brush method, whether commonly known as static or high-frequency. It should be said, however, that short and extremely rapid interruptions carry with them a cetrain amount of continuous current, and this is particularly true of static brush, vacuum tube and high-frequency discharges in general. All these interrupted currents are oscillatory, since the patient, the Leyden jars, coils of wire or other condensers are in circuit and are continually charged and discharged. Practically all of these currents are esspecially applicable to metabolic derangements. The lower blood-pressure —a beautiful illustration of the *regulative* effect—which I have affirmed, since high blood-pressure is, generally speaking, due to irregular metabolism.

Further than the general lines above indicated, it is impossible to testify in this paper the variations in method and application of these currents.

In conclusion, I regard the foundation principle of electrotherapy to be the stimulative and regulative power of electricity upon cell-activity.

Its great application is to derangements of metabolism and of the nervous system.

The high tension currents are conveniently classified as

1. Bipolar continuous high-tension.
2. Unipolar continuous high-tension.
3. Bipolar interrupted high-tension.
4. Unipolar interrupted high-tension.

The last including high-frequency currents in their many varieties of methods and applications.

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### ABDOMINAL FARADIZATION.

Henry Ermentraut, in the *Physicians' Drug News,* states that in many obscure abdominal neuroses galvano-faradization is unquestionably useful. Every one must be acquainted with vague abdominal sensations and pains which cannot be traced to any definite assignable cause. They are classed under the head of neuralgias. They are very distressing, and are not curable by the ordinary remedies. The pains are frequently periodic and have a varied intensity. Sometimes they are referred to the stomach and known as gastralgia, or dyspepsia. They are often cured by galvano-faradization, even when they are of long standing. The technique of treatment is to place the large dispersive electrode, sponge covered or otherwise, attached to the positive pole, over the region of the cardiac plexus, with another large electrode, attached to the negative pole, placed on the spine in the mid-dorsal region, and the current used for ten to fifteen minutes, being mildly but distinctly felt. The author has had some very satisfactory results with this treatment in vomiting or functional or nervous origin.

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### X-RAY DIAGNOSIS OF SYPHILIS.

Skinner, in the *Interstate Medical Journal,* says the radiographic diagnosis of acquired syphilis will depend upon the amount of osteal involvement. We usually look for these tertiary complications in the tubular bones of the legs

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and arms and the plates of the skull. The syphilitic invasion of the nose and palate, because of their anatomical locations, do not lend themselves to X-ray demonstration. The latter are usually so evident by inspection and palpation that the X-ray offers nothing of value.

The syphilitic attack upon periosteum primarily displays itself radiographically by a cloudy shadow of the periostal area, which is broader than normal. As the process increases we note a more distinct outline of the periosteum, with flecks of ossifying centres. If the process does not recede, we find that this ossification of the exudate resembles a layer of plaster upon the normal contour of the bone. If the cortex has become involved, without the formation of distinct areas of gummatous degeneration, this plaster process casts dense shadows, showing the osteosclerosis of cortical and periosteal areas. Where the cortex beneath an involved periosteum develops gummata, these gummata will appear as lighter spots surrounded by a darker zone of inflammatory exudate. The changes described in this paragraph are usually displayed in the tubular bones of the leg and forearm. Friedrich (1) states that a characteristic roentgen finding in syphilis is the combination of a gummatous periostitis and ostitis, with an ossifying periostitis and ostitis; an osteoporosis plus an osteoplastic process.

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## ELECTRICAL TREATMENT OF INFANTILE PARALYSIS.

Zimmerman and Bordet, in *Archives d'Electricite Medicale,* make an exhaustive report upon the whole question of electricity in the treatment of infantile paralysis. The treatment, they state, is based upon precise physio-pathological indications—it is a rational therapeutic. Its principal purpose is to reduce to a minimum the infirmities caused by the medullary lesions, and to restore as far as possible the voluntary contractility of the muscles. Of all the physical agents, electricity is the only one which is capable of provoking a muscular contraction analogous to the voluntary contraction. Massage does not produce the physiological contraction of the muscles, and the misleading appearance of suppleness to which this method gives rise when it is used by itself renders it inadvisable. As an adjuvant to electrotherapy, the authors are of opinion that the role of massage is an insignificant one. The choice of a current depends upon the results of electro-diagnostic exploration. If the muscles have conserved faradic excitability, recourse may be had to the currents of the induction coil. Galvanic interrupted currents are employed when the degenerate muscles respond to that form of excitation. Great care must be taken to avoid fatigue, and the authors prescribe the automatic electrization of groups of muscles. Electrical intervention should be made very cautiously at the beginning of the treatment. There should be no attempt to make a complete electro-diagnosis at the first seance. When the treatment is fully established the seances may last for an hour, providing always that there is no fatigue. The repetition of the seances should be very frequent—taking place every day during the active period of treatment, and, if possible, twice a day. The duration of the whole treatment, unfortunately, must be counted by years. It is rarely that one year suffices, more frequently it requires three. The treatment may be suspended with advantage during the summer months, and the patient sent to the seaside or the mountains. This change of air, without acting directly upon the paralysis, is of value to those children whose general state has suffered from their inactivity. During the second year of treatment the authors counsel the use of light orthopaedic appliances, and during the third year these, together with kinesiotherapy, may be in-

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creasingly employed, while the degenerate muscles are still electrized with persistence. The cessation of treatment is indicated when, for many months, the amelioration has shown no progress, either from the point of view of the voluntary movableness or from that of the electrical reactions. Summarizing the whole subject, the authors state that if the treatment is started sufficiently early and continued with method and persistence, it produces, as a rule, in the course of time a reduction of the impotence and a return, more or less remarkable, to functional power.

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### ELECTRICITY IN GASTRIC NEURASTHENIA.

A. Herschell recommends three forms of electrical treatment, the condensation couch, the sinusoidal current, and the constant galvanic current. The condensation couch should be given daily for several weeks, with a dosage not exceeding 350 m. a. No advantage is to be gained from the use of the enormous currents produced by some of the apparatuses, and the element of danger is not absent. Of the sinusoidal current either the triphase or the monophase will give good results, the triphase being preferably administered by electrodes. The monophase, if used, is given by means of a water bath. This latter mode, by-the-way, is an easy and convenient way of treating neurasthenia, as it can be rigged up in the patient's house and applied by himself, or with the aid of a nurse. The triphase alternating current is especially useful in that form of neurasthenia which depends upon involvement of the splanchnics and the large nerve plexuses of the abdomen. Hence it is our best remedy in cases of nervous indigestion accompanied by varying degrees of muscular atony.

Good results are obtained by the use of the constant galvanic current properly applied. It is best applied by means of a large electrode to the solar plexus, the anode being placed upon the epigastrium and the kathode upon the lumbar region. The dose should be from 20 to 50 m. a. In the treatment of muco-membraneous colitis and other intestinal complications of neurasthenia, excellent results have been obtained by the use of the hydro-electric rectal douche, employing the constant galvanic current.

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### THERAPEUTICS OF LIGHT.

McIntosh, in the *Boston Medical and Surgical Journal,* concludes that light penetrates the tissues; that in so doing the chemical rays produce fluorescence of the blood and serum which is reduced or absent in pathological states, as, for example, in malaria; that the action of light upon the blood stream reduces oxyhemoglobin and thus stimulates the chemistry of the tissue, that is to say, improves metabolism. The most useful portion of the spectrum is not the heat or luminous portion, but the chemical portion. The physiological effects of light flow easily from the marked penetration of the light rays, particularly the chemical portion of the spectrum. The blue light has a peculiar field in the control which it has over pain and hyperemia. Red light by its exclusion of the chemical rays plays an important role in the treatment of smallpox.

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### $CO_2$ SNOW TECHNIQUE AND INDICATIONS.

Edward Pisko, in the *New York Medical Journal,* declares that the practical use of the snow, how to apply, how much, at what pressure, how long to freeze, etc., cannot be learned from books; it must come to one naturally, one must study each case individually and find out the nature of the lesion. In a superficial juvenile wart or in a pin-head sized ordinary nævus in an infant, from twenty-five to thirty seconds, without any

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pressure whatsoever, will do. On the other hand, a destructive process, which has disfigured quite an area of the face, will sometimes need a very hard pressure for over one minute. If bleeding is produced, there is no fear, nothing can happen, and a whitish scar develops if left alone, just leave the area exposed and uncovered. If the burning sensation is very severe, lasting for a number of hours after the application of the snow, a mild solution of boric acid is to be applied ice cold, but no ointments nor powders. Besides, a bulla of various size around the orbital region and around the lips an œdema follows the day after. The patient must be told so beforehand in order not to be frightened. The author does not use any ether. He does not believe it is necessary if the snow was made hard enough by packing.

Solid carbon dioxide takes now the place of liquid air, which is quite difficult to obtain and to preserve, but we must admit that liquid air is the stronger and better agent, its freezing point being at 190° C., while carbon dioxide freezes at 90° C. Here is where the advantage of carbon dioxide comes in. It is not an ordinary cautery, it produces an inflammation, due to the freezing of the tissue,[1] its action and effect can be fully controlled from a superficial erythema to a total destruction of the diseased tissue. The snow is, as a rule, used in more or less smaller areas and only where a scar as final result is wanted; nævus, hypertrophied scars, angioma, leucoplacia, Keratosis, verruca, rodent ulcer, epithelioma, Keloid, Chloasma, tatoo marks, powder stains, dermatitis, and last but not least, lupus erythematosus. In all these we get the best cosmetic scar with a comparatively small amount of pain and skin destruction; it is "the" treatment for lupus erythematosus. Anything used heretofore was more or less undesirable for one reason or another, the destruction pertained to the entire skin and not only to the diseased tissue and the scar could never be controlled; here we get the best cosmetic results, and what more with a few applications we can prevent the process from spreading, quite a factor for the face of a female. In cases of deep seated lupus erythematosus, as well as rodent ulcers and epitheliomata filling almost the whole of the orbital cavity much pressure must be used up to one or one and one-half minutes' duration, still the pain is very little owing to the intense cold of the carbon dioxide snow acting as a local anæsthetic.

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### H. F. VACUUM ELECTRIZATION.

Ermentrant, in the *Physicians' Drug News,* points out that the advantage of this mode over the faradic, is that there is much greater electro-motive force, and it is necessary for the patients to remove but very little clothing. This is a decided advantage where you have many patients to treat, and especially some timid ones who would not disrobe for a treatment by the general faradization or galvanization. These will not hesitate to take the high frequency vacuum electrization, which will penetrate medium weight clothing without discomfort. This mode has very high potential, small capacity, and enormous frequency of oscillation. Nerves and muscles are acted upon in the same manner as by an application of faradization, but in a much more effectual and less painful manner. The muscles will react to this mode, when not the slightest reaction can be obtained with the strongest faradization. This mode may be used by means of special vacuum electrodes, viz.:—surface vaginal, rectal, ear, throat, and nasal tubes, but when the application is made to such sensitive parts, the negative pole should always be grounded, by means of a conducting cord, the end of which rests on the floor three freet from the patient. In giving these treatments with the high frequency electrodes, the hands should be kept as far as possible from the contacts of the vacuum tubes.

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# THERAPEUTIC BRIEFS.

**Coryza.—**

According to the *Prescriber,* the following prescription has a marvelous effect in cutting short a "cold in the head":

Sodium salicylate.....3i
Compound tincture of cinchona.....3ii
Aromatic spirit of ammonia.....3ii
Camphorated tincture of opium.....3ii
Tincture of ginger.....3ii
Chloroform water.....ad—oz. vi

M. et Sig.: One tablespoonful in water three or four times daily between meals.

**Hemorrhoids.—**

If the piles are protruding and painful, bathing them with a lotion of liq. plumbi dr. ij, lactis recent dr. ij, aqua dr. j, will give great relief. A tablespoonful of glycerine twice a day in milk, given internally, is very useful.

**Enuresis.—**

In boys it is recommended that a layer of collodion be applied at bedtime to the perpuce; before the boy goes to bed. This is done in such manner as to close the præputial orifice. Should the child wish to micturate, the seal can easily be removed with the finger.

**Nasal Antiseptic.—**

Bourgeois recommends the following ointment:

Balsam of Peru.....gr. xii
Wool fat.....gr. lxxv
Petrolatum .....dr. iiss

M. Sig.: To be used morning and evening. Put up in a collapsible tin tube.

This ointment, applied at the outset. will. the author says, often abort an attack of coryza. It may be used in simple chronic coryza and in ozæna.

**Cough.—**

The following is a good stock mixture for children:

Ammonium chloride.....gr. lxxx
Camphorated tincture of opium...Ziii mxl
Syrup of squill.....Zii mxl
Syrup of tolu, sufficient to make.....Zii

M. et Sig.: One teaspoonful as needed.

**Acne Atrophica.—**

Charles Forquet, in *La Clinique,* recommends after spraying with hot water, to apply an ointment of salicylic acid of the following composition:

Precipitated sulphur.....gr. lxxv
Salicylic acid.....Zx
Petrolatum .....Zx

M. ft. unguent.

**Wounds.—**

Axhausen advises simple aseptic dressing for wounds. Clean wounds, he says, should be covered with a dry absorbent and sterile dressing, a few layers of gauze should be applied, and then some absorbent cotton, and then a gauze bandage. Wood wool cannot take the place of cotton. Iodoform is to be condemned.

**Eczema.—**

When the eczema has healed, and the skin remains tender, itchy, and easily cracked, Ravogli recommends the following application:

Carbolic acid.....dr. j
Glycerin .....dr. j
Rose water.....oz. iij

to be rubbed gently on the skin with a cotton tampon.

**Asphyxia.—**

Raymond, of Paris, recommends the injection of oxygen subcutaneously in cases of toxic asphyxiation, such as is seen in the crises of asthma, heart failure, uremia, broncho-pneumonia, and lobar pneumonia. Hypodermic needle is attached to the oxygen tank.

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# SOME DOCTORS OF FICTION.

By George Thomas Palmer, M. D.

## VII. HONORE DE BALZAC—(1799-1858).

### The Country Doctor.

THE other doctors whom we have met in these little journeys of ours together, we have come upon quite incidentally. They were minor characters, quite outshadowed by others greater and more distinguished with whom they were associated. Fielding would not have called a surgeon, had he not needed him to patch the head of that unfortunate hero, Tom Jones, although Fielding has been known to introduce a doctor into his narratives for no other purpose than to show his unreasoning antipathy to the medical profession*. LeSage gave us Sangrado merely as the praeceptor of the greater Gil Blas, and when Gil Blas abandoned the art of healing, Sangrado was lost in oblivion. Bob Sawyer and his fellows and the fiery Dr. Slammer are shown to us merely as members of the hosts of persons worshipping at the shrine of the immortal Pickwick and even the distinguished Dr. Parker Peps would be quite unknown to us had he not been employed in delivering into the world the son of the haughty house of Dombey.

But the good Monsieur Benassis comes before us in his own right, standing in the dignity of a book and a province of his own, immortalized and placed in his exalted position by the "greatest writer of the post-Revolutionary literature of France, in *"Le Medecin de Campagne"*—"The Country Doctor." In fact, as we close the scarlet covers of this unusual book, we feel that we have not read a novel, but rather a masterly sketch written for no other purpose than to tell us of the country doctor and his remarkable life and work. It hardly seems like fiction at all. It is more a work of biography, as Honore de Balzac would write biography.

It was Balzac's ambition, "by infinite patience," to picture exactly the people of his own day, and he has pictured Benassis with minuteness of detail which would be wearying were it not strangely interesting. The scenes, with all their beauty, were created merely as backgrounds for Benassis; the characters merely as his associates or as subjects for his conversation.

As Commandant Genestas rode into the little mountain village in which Benassis had made his secluded home, after the tragedies of his early life, he held a brief interview with a poverty-stricken woman which gives us the key-note of the character of "the country doctor."

> "'Is M. Benassis a clever doctor?' he had asked, and this unfortunate had answered: 'I do not know, sir; but he cures poor people for nothing.'"

It has occurred to me many times, that when we make charity methodical and systematic, we may increase its efficiency, but we rob it of most of its beauty. Bounty and generosity seem inconsistent with rules and figures, perhaps because rules and figures contemplate giving to each man his exact deserts; while charity of the beautiful kind, overflows with blessings for all, regardless of right or merit. But Balzac follows an established rule when he makes the country doctor—him who is

* In "Amelia", Fielding interpolates a chapter, which has not the slightest bearing on the story—a chapter which some of the editors have omitted, contending that it serves no purpose other than reflecting the author's dislike for doctors.

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beloved by all who know him for his goodness and generosity—utterly careless as to the details of his household, his clothing, his money or his personal affairs. His gate is in need of paint, sags on its hinges and is left wide open; his domestic affairs are ruled absolutely by a hired servant, and his home life is made tolerable merely because that servant chances to delight in cookery and housewifery.

It is true that there are many beautiful characters in the medical practice of real life, who spread their charities with prodigal generosity; who smooth the hair of the pauper with infinite nicety, while neglecting due application of the comb to their own tangled locks; who give wine to the sick when unable to afford small beer for themselves; who, even when poverty stings them most, know not who owes them money, and care less. But whether such men be common or rare in real life, they are fascinating in fiction and the wise writer is the one who gives the people exactly what they want.

Balzac, in permitting the beloved Benassis to over-indulge in tea, that he may labor through the night under its stimulation, panders to popular taste. The scientist and the physician are permitted by common consent to carry out their unusual mental accomplishments under the influence of subtle drugs. There is nothing more attractive and fascinating in Dr. Conan Doyle's conception of "Sherlock Holmes," than that of the clever detective injecting cocaine into his arm, and that injection would not be half so effective—upon the reader—if the bright light was not "reflected upon the delicate barrel of the syringe."

There is a very common saying concerning the man of moderate ability who becomes dissipated—particularly if he be a surgeon—that "he is more skilful when intoxicated than the average man when he is sober." It is a popular fancy that the mending of the human body is a work so different from other vocations; so mysterious and developing such unusual forces in the physician, that there is no incongruity in conceiving these faculties greatly accentuated by subtle and mysterious drugs, which would prove only deadening and injurious to others. We must not conclude from the foregoing that Benassis was, in the least dissipated; but that reliance upon even the stimulation of tea, in a man who was in all things moderate, is a clever touch to the conventional medical man of fiction which one would expect from him who held the supreme place in French fiction.

In person Benassis "was a man of ordinary height, broad shouldered and deep-chested." His face was "not unlike that of a satyr; there was the same slightly protruding forehead, full, in this case, of prominences, all more or less denoting character; the same turned-up nose, with a sprightly cleavage at the tip; the same high cheek bones. The lines of the mouth were crooked; the lips, thick and red. The chin turned sharply upward. There was a sharp, animated look in the brown eyes, to which their pearly whites gave great brightness, and which expressed passions now subdued. His iron-grey hair, the deep wrinkles in his face, the bushy eyebrows that had grown white already, the veins on his protuberant nose, the tanned face covered with red blotches, everything about him, in short, indicated a man of fifty and the hard work of his profession." And we find this man, pictured with the infinite detail of Balzac, standing, in solemn dignity, at the bedside of a dying cretin.

The Commandant, who thus found Benassis, felt a thrill of surprise and horror at the sight of the patient—"a human face which could never have been lighted up with thought—a livid face in which a look of dumb suffering showed so plainly

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—the same look that is sometimes worn by a child too young to speak, and too weak to cry any longer; the animal face of an old dying cretin."

The story of how Benassis ridded the beautiful mountain valley of cretinism; the conception which the simple people had of the good luck which the cretin brought to the household—thus rendering his presence there more tolerable; the description of how Benassis brought the people from a state of poverty and degradation—these are full of interest to the medical man or to anyone who is in sympathy with the world of books. Through all the narrative we have drawn for us one of the powerful and one of the magnificent men of fiction.

Benassis had appreciated the truth upon which medical missions have been established. He understood that he who brings relief for bodily ills, may obtain a surer and more respectful hearing for his religious teaching from the heathen or from the poor, than can any other messenger of the word of God. "The peasant is always more willing to listen to the man who lays down rules for saving him from bodily ills than to the priest who exhorts him to save his soul," was Benassis' belief and following out his doctrine, he first made men of these simple people physically, then morally and, finally, spiritually.

Once, when an army officer had attended a military drama, which was then the talk of the day, he declared that the production was magnificent, but that he was kept in a constant state of fearful anticipation because the soldiers all wore their sabres on the wrong side where they would be quite inaccessible in time of action. Our enjoyment of medical fiction is apt to be marred by just such insignificant discrepancies and incongruities. Thus, we find ourselves quite unimpressed with Benassis' description of the young consumptive, who sang for the pure love of singing, although in so doing, he sealed his doom. We lose our confidence in Benassis as a physician when he tells the Commandant that consumptives undergo a change in their vocal organs which permits them to sing with a sweetness which no trained voice can equal; but the song of the dying consumptive, "unlike that of a man, of a woman or of a bird—the voice of the wonderful landscape," is impressive to the lay reader, and we are asking too much of a writer of fiction when we demand he be constantly accurate and exact. It is unreasonable to ask the writer of a novel to parade his characters, who are purely imaginary, before scenes and under conditions which are entirely real; but in the story of the Country Doctor, we have so fully forgotten that we are dealing with fiction that we expect the details and the minor incidents to ring absolutely true.

While we know that all of the people of the little mountain community loved the country doctor, we were made aware of this entirely through Balzac's having told us of that affection. We are not made to feel it, nor do we, in any way, share their love for Benassis. When he dies, we are quite willing to accord him all praise; but we feel no grief. We raise our hats in respect and place a garland of laurel on the cross which bears this inscription:

D. O. M.
HERE LIES
THE GOOD MONSIEUR BENASSIS
THE FATHER OF US ALL.
PRAY FOR HIM.

We do not shed a tear of personal regret, nor on his grave do we place a rose to show our affection. Will Carlton told us of the death of a country doctor and filled us with grief about it. Dickens would have shown us Benassis as a character whose death would mean a distinct and personal loss. Balzac introduced us to a

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doctor of fiction who could never become our intimate friend, but one whom we are compelled to respect and revere. But some way we feel that the fault lies not with Benassis; but with Balzac.

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## VIII. OLIVER WENDELL HOLMES. (1809-1894.)

### Doctor Kittredge.

BETWEEN the chapters, which have perhaps bored you, as we have wandered aimlessly through the writings old and new, in search of doctors of fiction, I have occasionally caught you glancing longingly at that set of books in blue which I have stored, within easy reach, above my desk, and I am of the opinion that, when my back has been turned, in jotting down these notes, you have anticipated me and have gone into these volumes which I had purposely reserved for the time when your interest should begin to flag and when you would be in need of some stimulant which would be acceptable and refreshing to any honest doctor that ever drew the breath of life. There are ten substantial volumes, the work of our own genial Oliver Wendell Holmes, and from "The Autocrat of the Breakfast Table," which was published in 1857, to "Over the Teacups" (1890), which appeared just four years before Holmes' death, there is hardly a chapter, hardly a page, which is not full of interest to the physician. For Holmes was, primarily, a man of medicine—that was his chief interest and his earnest life work—and it was quite impossible for him to conceal this fact in any part of his splendid writings.

That he produced this enormous amount of material—verse, story, essay—does not signify that he had neglected or divorced himself from medicine, but rather that he had manifold talents and an enormous capacity for work. That all that he wrote was uniformly excellent, merely indicates that he set for himself, in literature as in his medical work, standards which were exceedingly high.

Dr. Holmes was a constant reader of good literature of all kinds. His familiarity with the writings of all times is shown clearly in his own productions and especially in his essays of conversational style, while his Memoirs of John Lothrop Motley and of Ralph Waldo Emerson show what an accomplished litterateur he was.

And all the time that he was reading and writing and making a lasting name for himself in the broad field of general literature, he was keeping abreast with scientific medicine and teaching it with remarkable skill and ability. The breadth of the man and his ability to do more than one thing well, is shown in the manner in which his professional and literary successes went hand in hand. In 1836, the year in which he received his medical degree, he published a book of forty-five poems and during the next few years, which were exceedingly important in his professional career, he continued unceasingly at his literary work. In 1838, two years after his graduation, there were published the three medical essays which had won three of the Boylston prizes and 1839 was signalized by his appointment to the chair of anatomy and physiology at Dartmouth and by his editing "Marshall Hall's Theory and Practice of Medicine." In 1840, Dr. Holmes gave up his chair at Dartmouth to engage in practice in Boston, and in 1842 he published his remarkable, but not especially profitable essay, "Homeopathy and its Kindred Delusions." In 1847 Holmes was made professor of anatomy and physiology in Harvard University, a place which he more than creditably filled for a period of thirty-five years.

That the essay on "Homeopathy and its Kindred Delusions" did not accomplish what Holmes might have hoped of it, is now quite generally acknowledged even by the most ardent admirers of the writer. In fact, had he but stopped to

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consider it, the result of his scathing essay could hardly have been other than as it was. It was logical, to be sure; but cults and isms, whether they be meritorious or not, thrive upon abuse and persecution, and Homeopathy profited by the attention which so brilliant and distinguished a man as Holmes had given to it. The very earnestness of Holmes' attack gave to a vast majority of his readers the impression that in Homeopathy, the old school of practice recognized a competitor which was extremely formidable. But now, when the passage of time has so brought the allopath and the homeopath together that it is hard to tell where the practice of one ends and the practice of the other begins, the followers of both schools must read over that essay of the vintage of 1842 and reach the same verdict—that it is a splendid piece of reading.

Of the medical writings of Dr. Holmes, however, one stands head and shoulders above all the others in the matter of practical importance—"Puerperal Fever as a Private Pestilence" (1855)—in which, according to Dr. Theophilus Parvin,* "he probably did more than any other American physician to correct this erroneous teaching and to convince the American profession of the contagiousness of childbed fever. Many an American mother," adds Parvin, "owes her life to the striking array of facts he so clearly presented in sustaining his thesis; the number saved would have been still greater if his essay had been presented to every medical graduate before engaging in practice." What such a tribute means, appearing in an essentially practical treatise or text-book of the present day, is appreciated more by the medical student, who realizes what dreary things these usually are, than by the layman who may have come upon these pages and to whom Parvin's tribute will appear brief and unenthusiastic enough. In passing, it may be added, that Holmes' essay was severely criticised. To one especially bitter critic—a Philadelphia obstetrician—Holmes directed this reply: "No man makes a quarrel with me over the counterpane that covers a mother with her new-born infant at her breast. There is no epithet in the vocabulary of slight and sarcasm that can reach my personal sensibilities in such a controversy."

And in all of his many medical essays, Holmes taught a lesson that, apparently, has been forgotten: that literary style is not wholly inconsistent with medical writing.

But to dwell adequately upon the literary work of Holmes; the medical writings of Holmes; the teachings of Holmes; the life of Holmes, or his humor, his poetry or his clever expression, is entirely beyond the scope of these pages. The medical profession of the nation love him so well, that it is difficult to consider him at all without talking about him at length. And we have not come here to talk of Holmes; but rather to let him talk to us.

We have contended, in meeting some of the doctors of fiction, especially those who have been most vigorously and most cleverly caricatured, that these gentlemen were the creations of laymen who do not appreciate the spirit of the medical profession—whatever that may be. Dr. Kittredge is open to no such objection. He is created by a doctor who knew doctors—one who guided and taught them in the making and who knew and carefully studied the finished product. In fact, Holmes talked and wrote so much about doctors that we are all quite familiar with his views concerning them, and when we meet his Doctor Kittredge, the pages of that strangely fascinating novel, "Elsie Venner," we note at once how Dr. Kittredge and Dr. Holmes agree in many of their opinions. Aside from one thing—a love for and constant association with books—Dr. Kittredge might very easily be an Oliver

* The Science and Art of Obstetrics. Philadelphia, 1886.

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Wendell Holmes, transplanted from the classic shades of Cambridge to the rugged village of Rockland.

In the delineation of the character of Dr. Kittredge, Holmes illustrates this similarity between the creature and the creator, for he gives us little or no idea of the personal appearance of our doctor of fiction, but goes at once into his mental and intellectual traits—and he tells us that Dr. Kittredge also "was busier with the person's thoughts than with his words." If Dickens had shown us Kittredge, he would have marked him with some peculiar curvature of legs, some oddity of dress, some affectation or some mannerism. Holmes, on the contrary, deals largely with the inner man, as Kittredge himself does, and aside from the fact that the Doctor is sixty-three and bald, we are left to guess at his appearance.

> "Dr. Kittredge, the leading physician of Rockland, was a shrewd old man, who looked pretty keenly into his patients through his spectacles, and pretty widely at men, women, and things in general over them. Sixty-three years old,—just the time of the grand climacteric, A bald crown as every doctor should have. A consulting practitioner's mouth; that is, movable round the corners when the case is under examination, but both corners well drawn down and kept so when the final opinion is made up. * * The Doctor knew a good many things besides how to drop tinctures and shake out powders. Thus, he knew a horse, and, what is harder to understand, a horse-dealer, and was a match for him. He knew what a nervous woman is and how to manage her. He could tell at a glance when she is in that condition of unstable equilibrium in which a rough word is like a blow to her, and the touch of unmagnetized fingers reverses all her nervous current. * * The Doctor knew the difference between what men say and what they mean as well as most people. When he listened to common talk, he was in the habit of looking over his spectacles; if he lifted his head so as to look through them at the person talking, he was busier with that person's thoughts than with his words."

But the similarity between Doctors Holmes and Kittredge does not end with their attitude toward the men about them. It goes much further. Holmes liked horses, and he liked fast horses, and even race horses, and this he admitted freely, doubtless to the dismay of his straight laced New England friends. And Holmes, in creating a doctor of his own, imbued him with a love for horse-flesh and generously permitted him to own just such a beast as Holmes would have selected for himself. And that both of these amiable doctors knew a good horse, not merely by intuition, but by "show points," is manifested in the following:

> "The Doctor's mare, Cassia, was so called by her master from her cinnamon color. * * She was of the shade we call sorrel, or, as an Englishman would perhaps say, chestnut,—a genuine Morgan mare, with a low forehead, as is common in this breed, but with strong quarters and flat hocks, well ribbed up, with a good eye and a pair of lively ears,—a first-rate doctor's beast,—would stand until her harness dropped off her back at the door of a tedious case, and trot over hill and dale thirty miles in three hours, if there was a child in the next county with a bean in its windpipe and the Doctor gave her a hint of the fact. Cassia was not large, but had a good deal of action, and was

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> the Doctor's show horse. There were two other animals in his stable: Quassia or Quashy, the black horse, and Caustic, the old bay, with whom he jogged round the village."

The doctor's horse is a pitifully hackneyed subject, upon which more sentiment is wasted than upon anything the doctor has—far more than is expended upon the doctor's wife. The penny-a-line sentimentalists and even some excellent writers, delight in picturing the sympathetic old beast, hauling the doctor's chaise through mud and snow, developing wonderful speed in her spavined old legs, when speed is required, and finally, lying down and peacefully dying the day after the doctor's funeral. No one, as yet, has had the temerity to portray the old animal weeping over its master's grave, but the doctor's nag is permitted so much poetic and sentimental license in fiction, that I will not vouch for what some enterprising future writer will do unless the universal adoption of automobiles beats him to it.

But Holmes would not deprive Dr. Kittredge of a thoroughbred mare for the selfish purpose of being permitted to play upon the sentiments of his readers. We have heard him include his "two loves" in a single sentence: "I love my country and I love horses," and as "The Autocrat of the Breakfast Table,"* we have heard him speak more specifically about horse-flesh:

> "Stubbs's old mezzotint of Eclipse hangs over my desk, and Herring's portrait of Plenipotentiary—whom I saw run at Epsom—over my fireplace. Did I not elope from school to see Revenge, and Prospect, and Little John, and Peacemaker run over the racecourse where now yon suburban village flourishes, in the year eighteen hundred and ever-so-few? Though I never owned a horse, have I not been the proprietor of six equine females, of which one was the prettiest little 'Morgin' that ever stepped?"

And you will note that Holmes gave Dr. Kittredge not only a Morgan, but a Morgan mare. And, parenthetically, you will note that Dr. Holmes uses the pronoun "who" in referring to a horse.

Of the constant association of doctors with their horses, of their perpetual residence on wheels, Holmes says this, in "Elsie Venner," and a much more Holmesque paragraph would be hard to find:

> "If that primitive physician, Chiron, M. D., appears as a centaur, as we look at him through the lapse of thirty centuries, the modern country doctor, if he could be seen about thirty miles off, could not be distinguished from a wheel-animalcule. He inhabits a wheel-carriage. * * If he is classified in the Linnean scale, he must be set down thus: Genus *Homo;* Species *Rotifer infusorius*—the wheel-animal of infusions."

And now the similarity between Dr. Kittredge and Dr. Holmes disappears for a moment, as we hear the former discourse to the medical student about his books; but I half fancy that Holmes imagined that Kittredge's attitude toward books would have been his attitude had the surroundings of the two men been reversed:

> "'Why no,' said the old Doctor, 'I haven't got a great many printed books: and what I have I don't read quite as often as I might, I'm

* "The Autocrat of the Breakfast Table", Chapter II.

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afraid. I read and studied in the time of it, when I was in the midst of the young men who were all at work with their books; but it's a mighty hard matter, when you go off alone into the country, to keep up with all that's going on in the Societies and Colleges. I'll tell you, though, Mr. Langdon, when a man that's once started right lives among sick folks for five and thirty years, as I've done, if he hasn't five and thirty volumes bound up in his head at the end of that time, he'd better stop driving round and sell his horse and sulky. I know the bigger part of the families within a dozen miles' ride. I know the families that have a way of living through everything, and I know the other set that have a trick of dying without any kind of reason for it. I know the years when the fevers and dysenteries are in earnest, and when they're only making believe. I know the folks that think they're dying as soon as they're sick, and the folks that never find out they're sick till they're dead. I don't want to undervalue science, Mr. Langdon. There are things I never learned, because they came in after my day, and I am very glad to send my patients to those that do know them, when I am at fault; but I know these people about here, fathers and mothers, and children and grandchildren, so as all science in the world can't know them, without it takes time about it, and sees them grow up and grow old, and how the wear and tear of life comes to them. You can't tell a horse by driving him once, Mr. Langdon, nor a patient by talking half an hour with him."

Living in an atmosphere of scientific advancement, Dr. Holmes could not permit *his* doctor, Kittredge, to be intolerant of the advance of modern medicine, and shows him to us as quite willing to refer his patients, when necessary, to those who had kept in touch with modern scientific methods. As though he knew that the doctors who read "Elsie Venner" would want to get into more intimate touch with the Doctor, Holmes has the old gentleman take up into his "sanctum."

"It was a place such as anybody but a medical man would shiver to enter. There was the usual tall box with its bleached, rattling tenant; there were jars in rows where 'interesting cases' outlived the grief of widows and heirs in alcoholic immortality,—for your 'preparation jar' is the true *'monumentum aere perennius';* there were various semipossibilities of minute dimensions and unpromising developments; there were shining instruments of evil aspect, and grim plates on the walls, and on one shelf by itself, accursed and apart, coiled in a long cylinder of spirit, a huge *crotalus,* rough-scaled, flat-headed, etc."

But if anyone has doubted that Dr. Kittredge and Dr. Holmes are very much alike, that doubt would have been swept away by the conversation between the Reverend Doctor Honeywood and Dr. Kittredge, at the tea given by the Widow Rowens, at Hyacinth Cottage. We like Dr. Kittredge and credit him with many excellent principles and acts; but few men on earth could have put in his mouth the conversation used on that occasion, except Oliver Wendell Holmes. And if you were fresh from the Breakfast Table, where the Autocrat presided, and closed your eyes in Mrs. Rowen's parlor, you would swear that the Autocrat had found his way to Rockland and, as usual, was doing most of the talking.

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And now we are to be accorded the privilege of accompanying Dr. Kittredge into the sick-room—a privilege which he accords us, of course, because we are brother practitioners—and which Holmes gives to us, we half believe, because he wants us to see how a doctor ought to be in the presence of his patients:

> "The old Doctor was a model for visiting practitioners. He always came into the sick-room with a quiet, cheerful look, as if he had a consciousness that he was bringing some sure relief with him. The way a patient snatches his first look at his doctor's face, to see whether he is doomed, whether he is to be reprieved, whether he is unconditionally pardoned, has really something terrible about it. It is only to be met by an imperturbable mask of serenity, proof against anything and everything in a patient's aspect. The physician whose face reflects everything in a patient's condition like a mirror may do well enough to examine people for a life insurance office, but does not belong to the sick-room. The old Doctor did not keep people waiting in dread suspense, while he stayed talking about the case,—the patient thinking all the time that he and the friends are discussing some alarming symptoms or formidable operation which he himself is by-and-by to hear of.
>
> "The Doctor took her hand,—whether with professional views, or only in a friendly way, it would have been hard to tell. So he sat a few minutes, looking at her all the time with a kind of fatherly interest, but with it all noting how she lay, how she breathed, her color, her expression, all that teaches the practiced eye so much without a single question being asked. * * As she was not disposed to talk, he watched her for a while, questioned Old Sophy shrewdly a few minutes, and so made up his mind as to the probable cause of the disturbance and the proper remedies to be used."

We have now come to some remarks in regard to Dr. Kittredge's methods of administering drugs to his patients, which brings us back to the personal opinions of Dr. Holmes, and in view of the radical change which has come over our therapeutic teaching in the past few years, it is interesting to note that, aside from teaching the American medical profession the truth about puerperal fever, the author of "Elsie Venner" anticipated our present notions of therapy about forty years. As to Dr. Kittredge, we art told:

> "Some very silly people thought the old Doctor did not believe in medicine, because he gave less than certain half-taught creatures in the smaller neighboring towns, who took advantage of people's sickness to disgust and disturb them with all manner of ill-smelling and ill-behaving drugs. In truth, he hated to give anything noxious or loathsome to those who were uncomfortable enough already, unless he was very sure it would do good,—in which case, he never played with drugs, but gave good, honest, efficient doses. Sometimes he lost the more boorish sort, because they did not think they got their money's worth out of him, unless they had something more than a taste of everything he carried in his saddle-bag."

It is not surprising that Holmes has his Doctor rather doubtful about the indiscriminate use of drugs. "Some very silly people thought" that Dr. Holmes

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"did not believe in medicine," and they had some reason for thinking so. In his splendid essay on "Currents and Counter-Currents in Medical Science,"* Holmes expressed himself in a manner which was quite astonishing to his drug-giving colleagues.

> "If this presumption were established, and disease always assumed to be the innocent victim of circumstances, and not punishable by medicines, that is, noxious agents, or poisons, until the contrary was shown, we should not so frequently hear the remark commonly, perhaps erroneously, attributed to Sir Astley Cooper, but often repeated by sensible persons, that, on the whole, more harm than good is done by medication. Throw out opium, which the Creator himself seems to prescribe, for we often see the scarlet poppy grow in the cornfields, as if it were foreseen that wherever there is hunger to be fed there must also be pain to be soothed; throw out a few specifics which our art did not discover, and is hardly needed to apply, throw out wine which is a food, and the vapors which produce the miracle of anaesthesia, and I firmly believe that if the whole materia medica, as now used, could be sunk to the bottom of the sea, it would be all the better for mankind,—and all the worse for the fishes."

Whether we agree with him or not, Holmes was firm in his convictions and in his teachings we must admit that he anticipated Dr. Osler and his drug-nihilistic satellites full four decades, and, peculiarly enough, while it was a radical and unusual view at that time, Dr. Kittredge shared it with Holmes—and Kittredge did not pretend to keep advised of what was being done in the Societies and Colleges. It must have been Holmes who transmitted to him, by one of those mysterious mental processes in which the Autocrat always loved to dabble, what one particular physician was doing at Harvard and before the Massachusetts Medical Society.

And so Dr. Kittredge drifts out of our lives. But Holmes did not kill him in the last chapter, as is so often done, probably because Holmes himself was a man full of the joy of living and had no idea of dying at that time.

In fact, as I close the pages of "Elsie Venner" and terminate my acquaintance with Dr. Kittridge, I am impressed that he is perhaps the most interesting figure in all our assemblage of the doctors of fiction. Not that he is more entertaining than the others; not that he is drawn more cleverly. His importance lies in the fact that he is doubtless a conscientious picture of what the author believed he himself would be, were he a country doctor; and the creator of the old Doctor was the most distinguished and most brilliant figure among all of the literary medical men of the nation.

* Delivered before the Massachusetts Medical Society in 1860.

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# BOOK REVIEWS.

A MANUAL OF PHARMACY FOR PHYSICIANS. By M. F. DeLorme, M. D., Ph. G., Lecturer on Pharmacy and Pharmacology, Long Island College Hospital, New York. Second Edition, with 19 Illustrations. Philadelphia: P. Blakiston's Sons and Company. 1911.

In these days, when the medical profession is contending so strenuously for its inherent right to dispense its own remedies, it is of the highest importance that the physician should himself be the most powerful argument in the controversy. That is to say, that he should possess sufficient pharmacal information to enable him to intelligently employ the products of present-day pharmacy, and to apply therapeutic knowledge with the maximum of practical efficiency. To furnish him with this adequate information is the avowed purpose of this manual. As the author is careful to explain in his preface, it presents only those facts of the subject having interest for the medical man—no working formulae or quiz-compend attributes having been attempted. It contains all the essential groundwork of pharmacy and pharmacology necessary to intelligent dispensing, and should be a most valuable aid to the doctor who does this part of medical service. We especially commend the very sensible and fair-minded utterances of the author in his section on Proprietary Medicines.

COMPEND OF GYNECOLOGY. By William Hughes Wells, M. D., Associate in Obstetrics in the Jefferson Medical College; Assistant Obstetrician in the Jefferson Medical College Hospital; Fellow of the College of Physicians of Philadelphia. Fourth Edition, Revised and Enlarged, with 153 Illustrations. Philadelphia: P. Blakiston's Sons and Company. 1911. Price, $1.00.

This book belongs to the series of Quiz Compends issued on all of the major subjects of medicine by Messrs. Blakiston, and intended primarily for the use of students in refreshing their memories for the purpose of meeting examinations and for professors in the conducting of quizzes in their respective subjects. For this purpose they are admirably adapted, and the present volume is up to the general standard. It represents the fourth revision of the work, and embodies the present status of gynecology in condensed, epitomized form. It may well serve—and we suspect it does really serve—a wider end than that which we have referred to. It makes a very convenient ready-reference book for the practitioner; a sort of guide to the larger text-books. Such a use is perfectly legitimate, provided, of course, that it be not mistaken or substituted for the more comprehensive works.

PRINCIPLES OF PUBLIC HEALTH. A Simple Text-Book on Hygiene, Presenting the Principles Fundamental to the Conservation of Individual and Community Health. By Thos. D. Tuttle, B. S., M. D., Secretary and Executive Officer of the State Board of Health of Montana. World Book Company, Yonkers-on-Hudson, N. Y. 1910. Price, 50c.

Precisely the book we have been looking for. Far and away the most sensible, intelligible and serviceable book on the subject that has yet appeared. There is none of the absurd extravagance and impossible extremism which, unfortunately, characterizes so many of the writings on public hygiene and vitiates their practical usefulness. The whole matter is treated in a delightfully common-sense fashion, and the style of the book is clear, virile, and even fascinating. Its tone is optimistic and convincing. It will make a most excellent text-book for the teaching of health and hygiene in the public schools, and we can easily imagine that, with such a text, the children will look eagerly forward to the

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lesson. We would be glad to see it adopted in every school in the country, and we earnestly hope that every one of our readers will get a copy of it at once, and put it in the hands of their clientele. We are confident that the book has only to be seen to be appreciated and widely circulated, as it deserves.

A Text-Book of General Bacteriology. By Edwin O. Jordan, Ph. D., Professor of Bacteriology in the University of Chicago and in Rush Medical College. Fully Illustrated. Second Edition, Thoroughly Revised. Philadelphia and London: W. B. Saunders Company. 1910.

Jordan's second edition of his standard work on bacteriology has been brought strictly up-to-date. He has given to the profession in this work a carefully written and instructive treatise on the subject. He has not sacrificed the theoretical for the practical—a fault too commonly found in books on bacteriology. The descriptions of technique are excellent and are well supplemented by drawings and photographs. All the newer work on parasitology as it pertains to the practice of medicine, is incorporated in this second edition. A good description of the spirochaetal organisms, particularly the trepanoma pallida, is given, with Levaditi's method of staining same in chancrous and other syphilitis lesions. Due attention is given to the Wasserman reaction, although Jordan does not give the technique of the method of application of the test. We do not know of a more readable or valuable text-book on bacteriology than the work in hand.

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## AMERICAN PROCTOLOGIC SOCIETY.

**Office of the Secretary-Treasurer**
**1610 Arch Street, Philadelphia, Penn.**

The American Proctologic Society's prize for the original essay on any disease of the colon by a graduate of (not a fellow of the society) or a senior student in any medical college of the United States or Canada.

The American Proctologic Society announces through its committee that the cash sum of $100 will be awarded, as soon as possible in 1911, to the author of the best original essay on any disease of the colon in competition for the above prize.

Essays must be submitted, to the Secretary of the committee, on or before May 10, 1911. The address of the Secretary is given below, to whom all communications should be addressed.

Each essay must be typewritten, *designated by a motto or device, and without signature or any other indication of its authorship, and be accompanied by a separate sealed envelope, having on its outside only the motto or device contained on the essay, and within the name, the motto or device used on the essay, and, the address of the author.* No envelope will be opened except that which accompanies the successful essay.

The committee will return the unsuccessful essays, if reclaimed by their writers within six months, provided return postage accompanies the application.

The committee reserves the right not to make an award if no essay submitted is considered worthy of the prize.

The competition is open to graduates of medicine, (not fellows of the Society) and to members of the senior classes of all colleges in the United States or Canada.

The object of the prize and competition is to stimulate an increased interest in, and knowledge of Proctology.

The committee shall have full control of awarding the prize and the publication of the prize essay, and it shall be the property of the American Proctologic Society. It may be published in the Transactions of the Society and also as a separate issue if deemed expedient. The committee may increase its membership if deemed advisable.

Dr. Lewis H. Adler, Jr., Secretary.
1610 Arch St., Philadelphia, Pa.

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# NOTES AND MISCELLANY.

### LARYNGEAL OR WINTER COUGHS.

The *Journal of Nervous and Mental Disease* in an article by Dr. Walter M. Fleming says: In acute attacks of larnygeal or winter cough, tickling and irritability of larynx, Antikamnia and Codeine Tablets are exceedingly trustworthy. If the irritation or spasm prevails at night the patient should take one tablet an hour before retiring and repeat it hourly until the irritation is allayed. Allow the tablet to dissolve slowly in the mouth, swallowing the saliva. After taking the second or third tablet the cough is usually under control, at least for that praoxysm and for the night. Should the irritation prevail in the morning or at midday, the same course of administration should be observed until subdued. In neuralgia, in short, for the multitude of nervous ailments, he doubts if there is another remedial agent so reliable, serviceable and satisfactory, and this without establishing an exaction, requirement, or habit in the system, as morphine does.—The *New York Medical Journal.*

Pantopon, the new opium preparation introduced into therapy by Professor Sahli, contains all the alkaloids of the drug in their naturally occurring proportions, in a form quite soluble in water, ensuring high intensity and quickness in action.

Brilliant results reported by Grafenberg from its use in gynecology and obstetrics, by Brustlein Leipold and V. Brunn in anesthesia, by Sahli, Ewald and Hallervorden in Internal Medicine, and by Haymann in Psychiatry, go far to show that with use of this new combination there are avoided practically all the nausea. constipation and other by-effects which follow the use of the ordinary opium preparations and even morphine itself.

Pantopon is prepared by The Hoffman La Roche Chemical Works, 65 Fulton St., New York City.

Battle & Co. of St. Louis, have just issued No. 15 of their series of charts on dislocations. This series forms a most valuable and interesting addition to any physician's library. They will be sent free of charge on application, and back numbers will also be supplied. If you have missed any of these numbers, better write Battle & Co. for them before the supply is exhausted.

"Paraldehyd" posseses many of the good without the evil qualities of chloral. Used in Insomnia resulting from various causes. The objectionable taste of the chemical is, to a great extent, disguised in Robinson's Elixir Paraldehyd, which is an elegant preparation.

### STRICTLY IMPARTIAL.

First Matron: Yes, my doctor has the reputation of being quite a lady-killer.

Second Matron: O, indeed! Mine doesn't make the slightest distinction between the sexes.

### IT TAKES TIME.

"Your sister's a long time about making her appearance," suggested the caller.

"Well," said the little brother, "she'd be a sight if she came down without making it."—*Cleveland Leader.*

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## DOCTOR, LOOK YOU!

**Upon this picture:**

A poisonous agent should not be used for antiseptic douches and dressings.

According to a report of the Council on Pharmacy and Chemistry of the American Medical Association, a 1 to 5,000 solution of bichloride of mercury does not kill the staphylococcus phogenes aureus in five minutes contact. That is, it is not germicidal in that strength in that length of time, yet it is highly poisonous to the individual, if kept in contact with an absorbing surface for that length of time.

"Bichloride of mercury even in this dilute lotion (1:10000) has, when used, in the peritoneal cavity, given rise to toxic symptoms." Hare's Therapeutics.

Koch states that where albumen is present, bichloride is decomposed and rendered inert.

**And then upon this:**

Containing, as it does, those agents which are antiseptic in action, as well as inflammation allaying, and repair inducing, Tyree's Antiseptic Powder is indubitably the most effective preparation thus far evolved for employment in the treatment of either acute or chronic inflammation of the mucous surfaces, or other soft structures. It is especially efficacious in leucorrhea, gonorrhœa, vaginitis, pruritus, and chronic catarrhal affections of the female genital tract.

Dr. Jacob Geiger, Professor of Surgery, at the Ensworth Medical College, St. Joseph, Mo., in speaking of Tyree's Antiseptic Powder, says that it has been used in the above hospital with very satisfactory results. He considers it a good dressing powder, non-irritating in its effects.

Dr. T. E. Potter, Secretary of the Ensworth Medical College, St. Joseph, Mo., says that it has been used at St. Joseph's Hospital, St. Joseph, Mo., with very satisfactory results.

A liberal supply is furnished doctors free, upon request.

J. S. TYREE, CHEMIST, WASHINGTON, D. C.

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## GRIPPAL COUGH—LARYNGITIS—BRONCHITIS.

In these affections, antikamnia is indicated for two reasons: First, because of its absolute power over pain; at once removing this element of distress and placing the whole system in the best possible condition for a speedy recovery. And second, because of its power to control inflammatory processes, lowering the fever by its peculiar action on the nervous system. Codeine is strongly indicated because of its power as a nervous quietant, often quickly and completely controlling the cough. In nervous coughs, irritation of the throat, laryngitis, bronchitis and phthisis, where the cough is altogether out of proportion to the amount of expectoration, Antikamnia Codeine tablets will give prompt satisfaction. In fact, in cases of nervous coughs, irritable throat, so commonly attendant upon influenza and la grippe, as well as in sub-acute laryngitis, and slight bronchitis, this tablet alone will often so control the cough that the disease rapidly subsides. This is not strange when we remember that nothing could keep up this irritation more than constant coughing. In the more severe cases of bronchitis and in phthisis, the patient is not only made more comfortable, but the disease itself is brought more directly under control by checking the excessive coughing, relieving the pain and bringing the temperature down to the normal standard.


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# The Medical Brief

A MONTHLY JOURNAL OF PRACTICAL MEDICINE.

Vol. XXXIX. St. Louis, Mo., May, 1911. No. 5.

## EDITORIALS.

### EUROPEAN VS. AMERICAN POST-GRADUATE COURSES

A GREAT deal is being said nowadays, both in American and in European medical journals, about the unsatisfactory conditions—if, indeed, more emphatic characterization be not called for—which prevail in the medical circles of Vienna in connection with the post-graduate courses. We are ourselves publishing in this issue a communication received from an American physician who is now in Vienna, which, while it is much milder in tone, and less bitter in its charges, than many of the strictures that have been recently uttered and printed in Europe, sufficiently indicates a state of affairs in that time-honored medical mecca which is anything but creditable to the Vienna faculty or encouraging to the American pilgrims who annually wend their way to its scientific shrine. It would strongly appear that this venerable centre, which has for so many years held a place of unique honor and prestige in the world of medicine, is displaying a tendency to succumb to the spirit of commercialism, not to say professional and monetary greed. The ruling idea among the local faculty seems to have degenerated into a sharp competition for fees and aggrandizement among its members, the only common interest, apparently, being a determination to corral all the advantages of the situation within the circle of the native profession, which has crystallized itself into a sort of trades union among the Vienna faculty for the express purpose of shutting out everyone else from participation in whatever professional and financial spoils may be available.

This state of things is bad enough, but it is not the worst of the unfortunate situation. One might even put up with these unpleasant conditions, and consent to play fly to the Viennese spider, if the educational advantages to be derived from a course in Vienna were sufficient to compensate for the hard and disagreeable processes necessary to attain it. But, unhappily, a spirit of commercialism cannot prevail in an educational centre without exercising a pernicious influence upon the educational features themselves; and so we find, if we are to believe the reports that come from apparently authentic quarters, that the courses themselves are, for the most part, relatively barren and unprofitable to those who take them, ministering more to the enhancement of the prestige of the professor than to the true instruction of the post-graduate student or practitioner.

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All of this is of peculiar import, coming, as it does, at a time when the American student and physician is beginning to consider the question of hieing him away for the summer to some post-graduate centre where he may either round out his college curriculum, or acquaint himself with some of the progress and achievements of medical science that have passed over his head while he has been busy with the exigencies of his practice. It is enough to give him pause in his tentative determination to make a trip to Europe for this laudable purpose, and to raise the question in his mind of the possible preferability of selecting some American post-graduate school.

This journal has, in the past, been a consistent champion of the advantages of the American post-graduate course, as compared with that of Europe. We recognize, just as keenly as anyone, the broadening and culturing influence of mixing with other civilized nationalities, and seeing how they do things in other countries. We realize that Europe has much to impart that America does well to learn. And for the exceptional man, with time and money at his disposal, we cordially commend an extended visit to all of the European centres of medical science, to remain as long as may be reasonably convenient and to absorb all that they have to give. But for the ordinary, average man, whose time and money are both limited, who must crowd into a month or two the maximum of advantage with the minimum of waste, we question very seriously the wisdom of a course at any of the European centres. Nay, we do not question—we are sure that such an undertaking is unwise. It eats into time and money unduly, and as a rule sends the voyager home again with little else than the doubtful privilege of boasting to his colleagues and clientele that he has "taken a course in Europe".

In the case of the average medical student or practitioner, we are certain that his time and funds will be far better spent, and yield far more genuinely satisfactory returns, by putting in the summer months at one of the numerous excellent American post-graduate schools that are within his reach. Here he may reap all the benefits of instruction from men who have attended the European centres, with much greater facilities and capacity for profiting by them than he himself would enjoy if he went to Europe, and will receive solid work and experience without any of the red tape and paraphernalia that wastes so much time and money on the other side. And when he returns to his home practice, or undertakes his life work, as the case may be, while he may not wear the ornate distinction that pertains to the man who has "been to Europe", he will find himself in possession of real advantages which will help him to do his tasks in a thorough and workmanship fashion—and that, after all, is what brings both satisfaction and success.

## THE PITUITARY GLAND

UNLESS all signs fail, we are going to find in the pituitary gland a functional organ whose importance in the metabolic economy of the body will outweigh that of the supra-renal glands, and somewhat in their own sphere. A good deal of research and experimental work has been done on this little-understood structure in the past few years, in a quiet, unobtrusive sort of way; and we have reached considerably more definite data than is generally supposed. Crowe, Cushing and Homans have made pretty extensive investigations in the laboratory of Johns Hopkins, working with dogs, and have demonstrated some very striking phenomena on the negative side of the problem, which imply some equally striking conclusions on the positive side. Briefly narrated, their experi-

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ments proved that removal of the whole gland inevitably led to death of the animal, following a characteristic train of symptoms which, summed up, may be described as indicative of a general demoralization of metabolism and vital functionation, including a fall of temperature, failure of circulation and respiration, glycosuria and anuria. The older the individual animal, the more rapid the fatality.

An interesting feature of the matter is the relative consequences following removal of the two lobes of the organ. Loss of the posterior lobe does not appear to produce any special symptoms, except possibly an excessive sexual activity; whereas removal of the anterior lobe, even though the posterior lobe remain intact, brings about, in a less rapid sequence, all the constitutional results that follow removal of the entire organ. Partial removal of the anterior lobe produces severe metabolic and functional disturbances, one of the most marked of which is a condition of adiposity and either hyperplasia or infantilism of the sexual organs, analagous to the results of castration.

Arguing from these premises, several therapeutic uses for pituitary extract have already been suggested, and not a few of them experimentally tried out, with more or less definite results. The conditions in which it is suggested that this extract should have its most effective work are comprehended in the two classes of disturbance which are due to low blood pressure and to organic collapse (presumably through the sympathetic nerve system) respectively. Thus it has already been used with promising success in cases of post-partum hemorrhage, typhoid fever, tuberculosis, shock, and post-operative collapse. In exophthalmic goitre it seems to be of great value, so far as all of the circulatory and neurotic symptoms are concerned, but it has no influence whatever on the goitre itself. In the matter of raising blood pressure it is far superior to the supra-renal extract, its action being attained more quickly, and maintained much longer.

One thing strikes us very forcibly, as we contemplate *in toto* the findings of the various investigators and experimenters with the pituitary gland, namely, that the influence of its secretion does not seem to be directed toward any special phase or function of the body economy, but to exercise a general influence upon the functionation of the body as a whole. It would appear as though the secretion were absorbed by all of the tissues of the body,—or at least all of the active tissue,—and upon each of them it had the effect of enhancing its functionation. When one has included circulation, respiration, metabolism, and reproduction in the sphere of influence of a gland, there is not much more in the way of vital functioning to account for. We are wondering whether this generalization of absorption and influence may not be pretty safely predicated of all the internal secretions, and thus greatly simplify their physiology and therapeusis.

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## LIMITING THE MATERIA MEDICA

WE ARE thoroughly in accord with the movement which is becoming pretty general in the medical educational circles of this country and England to limit the scope of instruction in materia medica; and we believe that the Association of American Medical Colleges took a wise step this year when it adopted resolutions commending to the attention of medical educators and examiners the limited materia medica lists published by the joint committee of the Council on Medical Education and of the National Confederation of State Medical Examining and Licensing Boards, and urging them to recognize and apply the principle of limitation upderlying those lists. Similar resolutions have been in force for two or three years among the teachers in the medical schools of Philadelphia.

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We agree with the generally expressed opinion that the Pharmacopeia contains a far greater number of drugs and preparations than can possibly be covered in the therapeutic course of a medical school; that in the time allotted to this subject in the present medical curriculum it is practically impossible to discuss intelligently more than a limited number of the more important remedies, and that the restriction of the course to a picked list of materia medica is a working necessity, just as it has become a working necessity to abridge the study of almost every branch of medical science, because of the enormous mass of subject-matter which recent years have added to every such branch, so that it is nowadays possible only to "touch the high places", so to speak, and leave much detail to be filled in by the student in an elective and personal pursuit of such subjects as especially appeal to him.

But because we assent to all of this, we do not therefore endorse the suggestion made by Dr. Murray Galt Motter at the City of Washington Branch of the American Pharmaceutical Association that there should be a corresponding limitation of the Pharmacopeia. We see no necessary, or even logical, connection between the two propositions. The Pharmacopeia is not intended for the use of medical students or physicians, but of pharmacists, as a guide to the preparation and identification of drugs and remedies—hence, by-the-way, Dr. Motter's intimation that unless the Pharmacopeia undergoes such limitation medical schools will cease to use it is gratuitous and void. The fact that conditions surrounding the student and the practitioner make it impracticable for the one to intelligently study, during his school years, more than a comparatively few drugs, or for the other to habitually use the entire Pharmacopeia, does not, in our opinion, affect the desirability, if not the necessity, of including in that volume all the drugs and preparatons which are likely to be used by the medical profession as a whole, and therefore likely to come before the druggist for preparation and dispensing.

It is quite true, as Dr. Motter intimates, that the compilation of the Pharmacopeia is properly the function of the medical profession and ultimately for their benefit, in that it provides for the preparation and dispensing of the medicines commonly used by medical men. But it is equally true that the view of what constitutes the profession and its part in the Pharmacopeia must be broadly construed to embrace the whole practice of medicine so far as it relates to drugs. The variety of medicines used by the profession is as wide as the personnel of the profession. Even in the carrying out of the restrictive policy contemplated in the teaching of materia medica, there will be considerable variety of selection by the different colleges and educators. Yet we take it Dr. Motter would have the Pharmacopeia include all the drugs that are comprehended in this variety of selection. The same principle of Pharmacopeial inclusion should extend, in a broad way, to the entire profession of practising physicians, as well as to the teaching body.

We repeat we see no logical connection between Dr. Motter's two propositions. By all means let the educational curricula restrict the number of materia medica to be studied; no branch of medicine, as we have pointed out, can be exhausted in a scant four or five years' course. But no one would think of cutting out of a cyclopedia of medicine the portions of medical knowledge that could not, for lack of time, be specifically taught in a medical school. By the same token, the reasons which call for a restriction of materia medica to be studied in college do not affect the function and integrity of the Pharmacopeia.

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# Vienna the Medical Mecca

By E. L. Cooley, M. D., St. Louis, Mo.

Professor of Pediatrics, American Medical College.

OUR contributor confirms, from the points of view of the American visitor and post-graduate student, the reports which emanate from European circles, of the unsatisfactory conditions that exist in Vienna, and warns the intending voyager to this famous medical centre that he is destined to experience considerable disillusionment, if not positive shock, in many of his preconceived notions concerning the place. At the same time Dr. Cooley warmly praises the system which ensures to European medical institutions such splendid clinical facilities, and urges its adoption in American cities.

So much has been written and said relative to Vienna as a medical center, and so thoroughly have her advantages been exploited, that any attempt at a further elucidation seems like narrating a "twice told tale"; yet with all this voluminous literature, emanating from the facile pens of enthusiastic admirers or captious critics, it is remarkable how little the profession at large actually knows about the real, medical Vienna. From time to time the professional press is burdened with articles fulsome with praise, sternly critical, or purely descriptive, as the case may be; each containing a modicum of fact together with much extraneous verbiage. Out of this heterogeneous mass of information it is possible with time and patience to winnow the chaff; but the process is slow and laborious. In as much as over five hundred American physicians come to Vienna annually, the majority of them for the first time and with indefinite ideas relative to the situation, it seems but meet to detail at the risk of repetition, the practical, every day conditions as they really are.

Vienna is without doubt the greatest medical center in the world for English speaking physicians. Either through accident or design, she possesses certain advantages that give her unquestioned supremacy in this particular field. The center around which the local medical cosmos revolves is the "Allgemeines Krankenhaus", a huge, unsightly, antiquated structure, containing twenty-six hundred beds, and originally built for a monastery. In the year 1784 the municipality acquired the property and the reigning emperor, Francis II, remodeled it out of his private purse. A new hospital of double the above capacity is in process of construction and hopes are entertained of its completion within the next five years. By a law passed in 1855, autopsies are made compulsory on inmates of this hospital. The passage of this law made possible the present day exhaustive research work. Some twenty-five hundred autopsies are held annually; the diagnosis of the clinicians being checked up by the findings of the Pathologists. As a result, faulty, or snapshot diagnoses never escape unnoticed. In the above institution and the Polyclinic-hospital across the street from it, is centered practically the entire medical activity of the city.

This centralization of work, together with the grouping of courses made possible by the great array of clinical material at these hospitals, make Vienna an ideal place for medical study. Another commendable feature is the commercial push and business enterprise of the local medical fraternity, as compared with the indifference and lethargy

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characteristic of the profession elsewhere in Europe. Here they were quick to see the tide of American dollars setting their way and made due preparation to garner the harvest. There are now offered about one hundred and forty courses in English; thirty-five of which are on the nose and throat; thirty-two on the ear; twenty-one on the eye, thirteen on Gynecology and Obstetrics; eleven on internal medicine and pediatrics, and at least one on every branch of medicine. Not only in fitting himself for teaching the American in his own vernacular has the Viennese physician shown himself alive to his opportunities; he has gone a step further, and has organized himself into a union with the avowed object of assuming full control of the post-graduate work, and eliminating the Anglo-American medical association from any active participation therein. This association since its organization seven years ago, has worked many needed reforms in pre-existing conditions. It has eliminated predatory commercialism; enlarged the scope and character of the work; perfected an arrangement with the Dean of the University whereby the courses are assured, and their prices fixed and definite. It now dominates the situation and is the court of last resort in all differences between teacher and student.

The "Docent Verein", as the rival organization is called, is of very recent origin; the first intimation of its existence being the receipt of a communcation, February 24th, demanding the abrogation, by the American association, of all its rights and privileges relative to post-graduate work, as there are about one hundred and twenty-five American physicians in constant residence, with a monthly expenditure of seven thousand dollars in fees alone, it can readily been seen that the situation is pregnant with possibilities. No definite action has thus far been taken; but the dominant feeling in the association is to maintain its present status and resist encroachment. Unless an amicable settlement is effected, whereby the two societies can work together in harmony, resulting conditions can better be imagined than described. At any rate, it is important that future students keep well informed relative to the progress of this controversy and its ultimate outcome.

The new arrival, unless especially well informed, usually has certain preconceived ideas, built up largely on imagination which ill comport with actual conditions and, as a result, undergoes a process of swift and painful disillusionment. The first serious mental shock is the item of expense. This question is modesty or its supposed lack of importance. The fact that nine out of ten find their original estimates inadequate, even with strict economy, indicates a general misconception relative to the cost of living abroad. Time was when one could live cheaper in Europe than America, not so, to-day; at least for the medical student in Vienna. The cost of living is greater here than in New York or any large American city. The stranger is subject to overcharge on all purchases; petty-extras, and un-looked-for expenses, that total the aggregate cost far beyond its legitimate bounds.

Due allowance must also be made for time wasted in securing the desired work. In order to do anything worth while, a membership in the local association is necessary, and all courses are assigned by priority in registration. This must be done in person, nor can any definite information be obtained by correspondence relative to prospective work. Some professors enjoy a well merited and lasting popularity and their courses are always in excessive demand. Lorenz in Orthopedics; Schauta in Obstetrics; Wertheim in Gynecology; Neusser, Van Noorden, and Kovacs in medicine; Hamburger in pediatrics; Fuchs in opthalmology; Wager in neurology; and

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Finger in dermatology are among this number. If the objective point be the classes of one of these more prominent men, a wait of several months may be necessary before an opening exists. There are men in Vienna to-day who have waited six months for some special course meanwhile filling in the time as best they may. One-third the time spent here will be lost, as a rule, waiting for some special line of work. This condition works a greater hardship upon the unprepared than any other obstacle encountered, and cannot be too strongly emphasized. Do not come to Vienna unless prepared to stay one-third longer than necessary to do the required work.

While the work as at present laid out seeks to cover the whole field of medicine, the great bulk of it is advanced in character and best suited to those above the average in training and experience. Vienna is, at bottom, a training school for specialists, and fully one-third, if not one-half the number who come here would fare better at home. The courses are arranged to run twenty hours, one hour a day, three or more days per week. Most of them are completed in less than four weeks, and as much material as possible is crowded into this period, with scant attention to elementary teaching. In some of the specialties, notably the eye, ear, nose and throat, an attempt is made to co-ordinate the work; but as a rule, each course is independent and no attempt is made at gradation.

Relative to the excellence of the various courses and their practical value, there is of course, a great diversity of opinion. They are all good, theoretically, but many of them lack practical essentials. Those on the eye, ear, nose and throat are considered superior to any offered elsewhere in Europe. In obstetrics and gynecology as much cannot be said; these subject being taught, in the main, as well in America as here; and the same applies to operative surgery and internal medicine. The German is a therapeutic nihilist and gives scant attention to methods of treatment. Hamburger, without doubt, gives the best course on pediatrics in the world to-day for English speaking physicians; and the same can be said of Lorenz in orthopedics. Holzknecht in x-ray work is considered a world wide authority and gives the only course in Europe on bone pathology.

It is for pathology and clinical diagnosis, however, that the general practitioner, if he is wise, seeks out Vienna. The work is elaborate and exhaustive and the abundance and variety of the material affords splendid opportunity for study. The best courses given on these subjects, or those enjoying the greatest popularity are those of Stoerk, Kovacs, and Exner in gross pathalogy, medical and surgical diagnosis, respectively. The work of Stoerk is all advanced; he never shows anything but rare and complicated cases, and deals very little with minutiae. Kovacs is renowned for his hair splitting differentiation, and revels in the abstruse and obscure. Exner is more liberal and occasionally descends to simple things; but he, too, loves complications and finds it hard to keep clear of them, while the medical profession of Vienna fairly teems with brilliant young men and famous older ones, the conviction persists that her medical prominence is due not so much to this fact as to the abundance and variety of her clinical material and the manner in which it can be used. Not only does this apply to Vienna, but to all medical Europe as well. To sum up; the sick poor are used for teaching purposes when required; if those in need of medical attention seek state or municipal aid, they must lend themselves to the advancement of medical science; from this there is no escape, and until America adopts a similar system the advantages, especially in research work, will lie on this side of the water.

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# Prostatitis

By J. A. Riebal, M. D., Columbus, Ohio.
Professor of Genito-Urinary Diseases in the Ohio Medical University.

SOONER or later every practitioner is sure to be confronted with the problem of the prostate, because it is an inevitable attendant of advancing age in his patients. And there is no problem which is calculated to give him more vexation or to more severely tax his professional resources. Dr. Riebal's paper is directed toward the questions involved in diagnosis, rather than to those of treatment, under the maxim that a disease properly diagnosed is half cured. He tells us especially how to differentiate it from seminal vesicultis, which it often closely resembles. At some future time we hope to be able to prevail upon the author to give us a companion article on the different methods of dealing with this most vexed condition in old men.

There is no organ in the human body of which the physician has less definite knowledge than of the prostate yet there are few conditions which can be more accurately diagnosed than chronic prostatitis. This is probably the most important complication of gonorrhoea, for the reason that the gonococci with all their infectious qualities unimpaired in the diseased tubular glands of the prostate may be unsuspected.

Chronic prostatitis is important on account of the profound disturbance of the general nervous system as well as impairment of the sexual function. In the majority of cases the disease originates in an attack of acute catarrhal prostatitis which becomes chronic or by slow insidious extension through the prostatic ducts of an inflammation from the posterior urethra. In the latter case is not always due to gonorrhoea, but may have originated from sexual excesses.

An opportunity has scarcely been offered for observation of the changes in chronic prostatitis, but these are noted by gross appearance, by palpation, etc. The prostate is enlarged, the seat of a diffused swelling or enlarged in certain areas.

By cystoscopic examination the prostatic ducts and their mouths are dilated as far as can be seen through the crystoscope with an inflammatory area around their mouths which keeps them open and gaping. The mouths of the ducts are filled with debris which may be easily forced out by the exploring finger in the rectum and by muscular contractions of urination. In other cases the mouths of the ducts are colsed and can only be demonstrated by pressure within the rectum.

### Symptoms.

While it is possible for parenchymatous prostatis to give no evidence of its existence other than physical signs, there are certain subjective symptoms that appear and disappear as the inflammation varies in intensity. These symptoms are vague and are described differently by different patients but the usual symptoms are (a) frequent and urgent urination. (b) Partial or complete impotence. (c) Some complain of irritation as though there was a ball in the rectum mistaking it for constipation in the lower bowel. (d) Vague pains above symphysis pubes and weight in the lower belly, pain in back, and down the thighs.

These symptoms are most always due to tension of the swollen prostate within its capsule.

Mental symptoms which are grouped under the term sexual neurasthenia, may

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be absent, but are usually very strikingly manifested in the spirits and temper. These patients first complain of loss of strength, forgetfulness; there are melancholic or hypochondriacal, there is irritability of temper and mutability of mental effort.

**Diagnosis.**

As the history of chronic prostatitis, seminial vesiculitis and chronic posterior urethritis are similar one can only make a differential diagnosis by an examination of the patient. First, palpating the prostate per rectum. Second, microscopic examination of the fluid expressed from the prostate. On palpation of the prostate is found to be uniformly enlarged and tender, the right or left lobe only involved, or an irregularity on the surface of the prostate, which indicates that only a few tubules are affected.

To distinguish between prostatitis and seminal vesiculitis is at times impossible on account of the seminal vesicles also being involved at the same time. On palpation of the prostate it is found that the secretions are more easily expressed than in normal conditions. This is what is termed the expressive-urine test which is made by massaging the prostate through the rectum expressing the contents of the prostatic tubules. In a normal prostate, after massage, the urine is milky from mixture with prostatic fluid while in diseased conditions flakes, masses and strings are formed by the thickened prostatic secretions. By inspection of this we cannot always form a correct opinion, and a centrifugal and microscopic examination must be made.

Under microscopic examination if no pus is present prostatis can be excluded. The normal prostatic fluid is found to contain many elements—mucus, granular phosphates, oyxlate of lime, calcium phosphates, etc. (2) epithelium from the bladder, glands and ducts, (3) Amylond bodies occur most often in older subjects. (4) Phosphatic concretions are also found in older subjects. (5) Boettschner's crypts. (6) Spermatozoa are usually found under all conditions.

**Treatment.**

The confidence of the patient must first be secured for these patients are very suspicious that they cannot be cured.

Internal medication—Tonics, saline cathartics, ergot, in half drachm doses four times a day. Massage of the prostate twice a week. Irrigating the bladder every second day oxy. of mercury 1 to 4000, permangante 1 to 5000, silver nitrate 1 to 10,000.

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## TREATMENT OF DYSMENORRHEA.

Siredey, in *Quinzaine Therapeutique*, gives the following advice regarding the treatment of painful menstruation: Before the flow begins to make its appearance the patient should be made to take a warm bath of a temperature of 98 to 100 degrees Fahrenheit, repeated, if necessary two or three times during the day, gradually increasing the temperature to 104 degrees F., if the condition of the patient permits of it. In addition, rest in bed must be insisted upon, and inunction by one or other of the following sedative mixtures, after the application of hot compresses or poultices:

Camphorated oil of chamomile..℥iss;
Oil of hyoscyamus.....℥iss;
Tincture of opium.....℥iiss;
Chloroform .....℥iii.
M.

Chloral .....℥iv;
Camphor .....℥iv;
Tincture of opium.....℥iiss;
Wool fat.....℥v.

Enemas of warm water, or decoction of flaxseed, are advised, and the internal administration of the following:

Tincture of belladonna .....mxxx;
Tincture of cannabis indica...mxxx;
Wine of opium.....℥iii.
M. et Sig.: Twenty to thirty drops in water.

If the pain is severe, antipyrine, seven to fifteen grains, should be added to the enema, or chloral hydrate, forty grains, and tincture of opium, twenty to twenty-five drops.

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# The Lymphatics

By E. C. Henry, M. D., Omaha, Nebraska.
Professor of Anatomy, John A. Creighton Medical College,

WE doubt very much whether, in ordinary teaching and practice, adequate attention is given to the physiology of the lymphatics and the part they play in health and disease. Dr. Henry gives a most interesting summary of the history of their discovery, which, as he rightly says, reads almost like a romance. He then points out their anatomical significance, and the relations which they sustain to certain disease processes, of which not the least important is the role they play in the metastasis of malignant growths. He enunciates the rule that when such a growth has invaded the lymphatics, operation is useless—except, we take it, as a palliative measure. He regards the lymphatic system, and properly, we think, as a large secretory gland.

The discovery of the lymphatic system reads like a romance.

In the year of 1622 Asellius was one day showing his friend the arrangement of the nerves and the movements of the diaphragm in a dog, in turning the intestines to one side he noticed some white cords in the mesentery which he had never seen before. He completed his demonstration but the next day he went back to look at the white vessels he had seen, but to his astonishment they had all disappeared.

Asellius was a fine anatomist and a thoughtful student. He saw that the only essential difference was, that after first operation the dog had been fed about an hour before, in the second case the dog had had no desire for food owing to his previous operation.

So he reasoned that if he would feed a dog, wait an hour or so the vessels would reappear.

Imagine his satisfaction when he found his reasoning correct.

He called the vessels lacteals because of the white fluid they contained.

At that time physiology taught that all food stuffs must be worked over by the liver before it could pass into the blood, so Asellius taught that the lacteals entered the liver.

Years before Eustachius found the thoracic duct which he found emptying into the veins of the neck, but skillful as he was he got lost when he followed it into the abdominal cavity. He did not find the receptaculum chyli.

That is not especially surprising as the chyla cyst is usually absent and its place is taken by three or four diverticuli into which the lumbar and intestinal trunks empty.

It took about one hundred years to work out in detail the lymphatic system as we understand it today.

During all these years the medical profession have looked on the lymphatic system as the great drainage canal of the body, and only within the last 15 or 20 years have such men as Poirier and Cuneo shown that this is but one of its many uses. It is to call your attention to these other uses that I write these lines.

At least one-third the weight of the human body is fluid in the form of lymph moving in the lymphatic channels. The lymphatic channels added together would make an immense cyst whose wall is a secreting membrane for the lymph is not a transudation from the blood-vessels, but is the result of vital cell activity.

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Not only do the lymph vessels secrete this own peculiar products but they receive the internal secretion from the ductless glands; so that the products of the Thyroid Thymus-Supra-renals are poured into it.

All the fluid in the lymphatic channels is strained from one to three times before it is allowed to enter the blood stream. This straining is accomplished by passing through a lymph node and comprises changes both chemical and mechanical.

In the abdominal cavity we find from three hundred to four hundred lymph nodes and it is to this group of glands we are indebted for at least one of the white blood corpuscles namely the mononuclear lymphocyte.

So the two great functions of the lymphatic glands are to stop invasions and to provide soldiers.

It is interesting to note the variations in animals. How the circulation is carried on, for example in amphibians the lymph nodes contain muscular fibres which enable them to rythmically contract like the heart. In the frog the lymph canals empty into the veins in the pelvis as well as in the neck.

Another interesting point is seen in the lymphatic tissue arrangement.

In the lower animals such as the siren the lymphoid tissue is arranged in the submucous coat of the alimentary tract and is not differentrated as in the high types. In man we find a collar of lymphoid tissue at the junction of the mouth and pharynx. We call part of this tissue Tonsil, nasal or phayrngeal according to location.

The soft palate and uvula is full of lymphoid tissue.

This adenoid tissue is placed as a sentinal to guard the alimentary and respiratory tracts.

The oesophagus and stomach contain very little adenoid tissue, but out to the left of the stomach is the spleen, the largest collection of lymphatic tissue in the body. In the upper part of the small intestine we find some lymphatic tissue and as we approach the junction of the small and large intestine we find Peyer's patches and solitary glands, and last but not least, Tonsil, Spleen, Peyer's patch and appendix are all the same kind of tissue and may be infected with the same germs.

Typhoid fever may have its primary lesion in the tonsil or in the appendix quite as well as in Peyer's patch.

Some of those cases of typhoid fever that finally developed an abscess in the side were simply the adenoid tissue of the appendix breaking down, the same as in regular appendicitis.

That case of appendicitis you had and called in the surgeon to operate on and after the operation ran a regular course of typhoid fever, simply had the primary lesion in the appendix and later the other Peyer's patches became involved and the typhoid took its usual four weeks' course.

The importance of the lymph canals has been only partially recognized by the Surgeon even in recent years. He knows that they carry infection and distribues malignant neoplasms; but even today few Surgeons recognize how wide is that distribution and how free in the anastomosis.

Only today I read the report of a famous New York Surgeon on cutting out half the tongue for cancer and a discussion was raised as to taking out the adjacent glands.

If a man will spend a few hours studying the arrangement of the channels in the tongue and note this wide distribution extending almost to the sterno-clavicular articulation, he will not stop with any half tongue dissection.

A few years ago I saw Wertheim's Charts hanging on the walls of his private office, they presented a picture never to be forgotten, more than three hundred women had submitted to his very radical operation for cancer of the

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uterus, which consists in removing the uterus broad ligaments and lymphatic glands up to the bifurcation of the aorta.

His charts give the clinical findings the microscopical examination and the final result.

Without a single exception when the cancer was found in the lymphatic glands or retroperitoneal tissue he had a return of the disease. So I reiterate my former statement, if the molignant disease has entered the lymphatic tissue, operation is useless.

The important points then to which I would call your attention are as follows:

First. The lymphatic vessels constitute a large secretion gland.

Second. It receives the internal secretion from the ductless glands.

Third. The Tonsil-Spleen-Peyer's Patches Appendix are actually the same.

Fourth. The lymphatic canals carry infection into the body, and account for the metastatic growths of malignant disease.

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## FOOLISH ECONOMY.

Some time ago a man consulted an eminent physician regarding a trouble near his ear or in his ear, he could hardly tell which. He had received treatment for it by several physicians without success.

The doctor recognized the affection and knew what in all probability would relieve it, and wrote a prescription containing a certain alkaloid which was to be used as an external application near the ear.

The man took the prescription and had it filled at a high grade drug store. Although he expected to pay a good price, he was somewhat surprised to find that his bill for this one prescription was $3.50. However he used the remedy as advised, with marked and immediately apparent improvement.

The doctor was pleased with the progress he was making, but like the man was somewhat disturbed at the charge made for filling the prescription, and advised the man to take it, when it needed refilling, to another drug store, where the charge proved to be less than one-half as much.

The man continued to use the prescription faithfully, but improvement was no longer evident. The doctor was not satisfied with the progress of his patient and went to the druggist who had put up the original prescription charging $3.50 for it.

"Your medicine," said the doctor to the druggist, "was certainly all right, and I am not pleased with the quality of the drug that my patient got at another place, but I do feel that you charged him altogether too much for it. I would like to have you fill the prescription and I would like to have you make a reasonable charge."

"My dear doctor," said the druggist, "at what store did your patient get the prescription filled the second time?" The information was given. "Now," continued the druggist, "will you do me the favor to step down to that store and secure a sample of that drug you spoke of?"

The doctor did so and was convinced by examination that the article which had been used for filling the prescription was feeble, inert, and of no more value for the purpose intended than so much flour or epsom salts.

He was honest enough to report the exact fact to the druggist, who then in turn, made a slight calculation and found that the druggist who had sold the inert and useless prescription at $1.50 had secured more than twice as much profit for himself in the transaction as the first druggist who had charged $3.50 for what was supposed to be the same thing.

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# Seborrheic Eczema

By A. Winkelried Williams, M. B. and C. M. (Edin.), D. P. H. Lond.
Physician to Skin Department, Royal Alexandra Hospital, Brighton, and to the St. Mary's Dispensary, Brighton.

SKIN diseases are, as a rule, the *bete noir* of the general practitioner; and of all skin diseases, eczema is the most commonly encountered and the most obstinate to handle. It is almost Protean in its forms, and ubiquitous in its point of invasion. Hardly any part of the epithelial tissue is exempt from its attack. For these reasons, constituting a combination of great importance to the general practitioner, we depart from our rule of brevity in this special instance, and publish, in full, the whole of Dr. Williams' excellent article on the subject. The reader will find it to be full of helpful suggestion, in characteristic English style—clear and practical. It is the kind of information that can be incorporated, bodily, into the physician's actual work.

The unqualified term "Eczema" is unfortunately at the present time a vague covering for a variable number of diseases, originally used by Aetius to describe boils and carbuncles its original definition has been lost and varied by a number of writers. The history of the name and the way the confusion has arisen is described in detail by *Unna* in the first chapter of his work in "Pathologie and Therapie des Ekzems".*

Seborrheic Eczema the subject of this paper is a type of the parasitic forms of eczema, the differentiation of which the world owes to the genius of Unna. The writer retains Unna's title despite the fact that the unfortunate multiplicity of synonyms which complicates the science of Dermatology clings to this condition, thus the terms Eczema, Seborrhoid, Descending Eczema, Ascending Eczema, Seborrhoic dermatitis, Pityriasis capitis, Dandruff, Alopecia seborrhoica, Alopecia, pityrodes, Pityriasis Rubra seborrhoica, etc., are constantly applied to the disease generally or some of its types.

The exact organism causing the disease is still somewhat uncertain, the most generally accepted are the Morococcus of Unna or the microbacillus of Sabourand.

The scalp is the most common site of origin (Payne's descending eczema) occasionally it may start in the axillary or inguinal regions, or in the feet (ascending eczema).

The lesions of the scalp vary considerably, there may be a dry scaling from a pale or pinky punctuated skin to which may be added the *more visible* inflammatory reactions of redness or swelling followed by more or less leeting and crusting. In other cases there may be an oily flux; some authorities maintain that this invariably precedes the other lesions, but its degree being slight it is often overlooked.

The Glabrous Skin lesions present even greater variety. Usually they commence on a somewhat greasy skin surface as small yellow red macules which become slightly raised above the general surface; later scales develop at first greasy but generally become drier as the disease progresses. The patches increase in size, infiltration, etc., they may become confluent, sometimes involute in centre forming spreading rings. Papules, vesicles, pustules with sequelar, leeting, crusting, etc., may accompany the above lesions often due to addition of other organisms to the original offenders. In many cases the dry surface predominates, extensive scaling may result and the patches then can only be destinguished from Psoriasis by the history of their mode of evolution or the possibility of observing their mode of

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spread from the typical sites of origin. It sometimes happens, but happily rarely, that the whole surface may become covered with a red, violency scaling eruption, almost identical with Pityriasis Rubra.

Acne Vugaris, Rosaced, Acne Vareoleformis, Impacted Cerumen of external auditory meatus are common complications of Seborrhoic Eczema; some say they are varieties, not complications. It is, however, quite certain that one's success in the treatment of the various forms of acne is much greater when vigorous treatment of the scalp is added, even when the only morbid manifestation is a slight degree of dandruff scaling. The same treatment applies with equal force to recurring accumulations of wax in the ear, the return of the trouble can often be prevented if the seborrhoic condition of the scalp is treated.

Common sites for seborrhoic eczema after the scalp are the ears, forehead, back of neck, sides of nose, furrows of cheek, angle of mouth, chest, back, nipples, scrotum, umbilicus, areas of limbs where it can be inoculated by patient's nails infected by scratching, at times it also attacks the red surface of lips. Most of the regions are where the sebaceous follicles are highly developed.

Quite recently one or two writers have endeavored to cast doubt upon the microbial origin of all the manifestations of seborrhoic eczema, thus Darier (*Ann. de Dermat. et de Syph.*, January, 1907) has devised a new theory and a new name for certain stages of the process, i. e., kerosis, which he defines as "a morbid state of the skin which assumes a yellowish or greyish tint, with unduly marked pilo-sebaceous orifices; the consistance of the skin surface is sometimes dry, sometimes oily; there is a tendency to branny desquamation and a special vulnerability which predisposes to special superficial infections. The skin may be dull or oily and glistening in lustre." He further goes into details of the conditions of the various elements of the skin which he includes under "kerosis" which correspond to what is generally considered the early stage of reaction to the seborrhoic infection. He likens all these to the vernix caseosa and sebaceous acne of infants and since these are not microbial diseases he considers it an indication that kerosis also is non-microbial but rather an anomaly of skin action, the essence of which is its disturbed nutrition leading to a modification of the circulation of its juices.

Comparatively few will consider *Darier's* argument as convincing. The evidence in favor of the parasitic origin is much stronger and at all events this view forms an excellent working hypothesis for therapeutical work which has stood the test of experience.

**Treatment of Seborrhoic Eczema.**

I. *Local treatment will cure.*

II. *Scalp treatment is imperative, or recurrences and exaccerbations are inevitable, excepting on a small percentage of the rarer cases of ascending eczemas.*

A. Scalp treatment. Clear away debris (scales, crusts, loose infected hairs). Treatment of infected skin surface.

INFANTS. Cleanse scalp with loric starch poultices;—one teaspoonful of boric acid and 4 tablespoonfuls of starch are mixed with a little cold water; a pint of boiling water is then poured on the mixture. The jelly thus formed is spread on linen or calico ¾ inch thick, and, when cool, covered with muslin and applied to the part. It should be covered with impervious wool or jaconet and remain on a few hours. After removal if crusts are not easily wiped off the poultices should be reapplied.

After removal of crusts a mild antiseptic ointment should be applied e. q.

Acid. boric.....gr. xx to xxx
In cold weather:
Lanolin .....3iv
Ol, oliv.....3iv
In hot weather:
Lanolin .....3vi
Ol, oliv.....3ii

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If the infant has little or no hair Ihle's paste is advantageously used, i. e.:

Acid. Salicylic.....gr. x
Tinc. oxid., Amyle, Lanolin, ol oliv. *aa* 3ii

Like all powder pastes, it should be spread on in a very thin layer.

If there is pustulation the following ointment should be applied after cleansing the scalp:

Hydrarg am. chlor.....gr. x
Vaselin .....3j

Or, if in addition to the pustulation there is much liquid exudation:

Hydrarg, Am. Chlor.....gr viii
Tinc. Oxad. Amyli, Lanolin., Ol. Oliv. .....*aa.* 3ii

These ointments are also suitable for treating the lesions of other parts of skin of infants.

OLDER CHILDREN AND ADULTS. — Cleanse scalp with the following wash:

Ammon. Carb.....3ii
Sod. Biborat.....3iv
Ag. ad.....3xii solve diende adde
Glycerin .....3vii
Spt. Vini Meth: (vel Rect:).....3vii

It should be freely rubbed in and allowed to soak into scalp for 10 to 20 minutes or until the scalp tingles. Another application suitable for patients with short hair is ordinary Camp. paraffin. It should be freely applied and left on 15 minutes, care being taken to avoid its running down into the eyes. Vigorous friction should be avoided or an electric spark may fire the paraffin vapor, and, of course while it is soaking in the patient must not go near a flame or light a cigarette, etc. After soaking with either of the above, the head must be washed with soap or spirit of soap (sapo mollis, 2 parts; spirit, 1 part) and hot water and dried well. It is essential to apply the skin surface application *directly* after drying. The media for this application may be ointments, pomades or lotions. In bad cases, i. e., cases with large quantity of scaling, ointments are usually the best to begin with, suitable formulæ are:

Sulphur. Praecip.....3p to 3i
Acid. Tannic.....gr. xx to xxx
Adeps Benzoat.....3i

The stronger application to be used when there is no distinct redness of the skin—

Or *Unnas* Pomade:

Resorcin.....gr. xiii
Sulphur. Praecip.....gr. xxv.
Ol. Amygdal. Dulc.....3vii
Ol. Theobrom.....3iv

The hair should be parted at about 2 inches intervals and a small quantity of the ointment or pomade rubbed along the parting lines. As much as possible should go to the skin and as little as possible to the hair shafts.

Many patients object to ointments and pomades; in such cases a lotion Brilliantine may be sprayed along the parting lines or applied with a small brush or sponge, e. g.:

Resorcin .....gr. 70 to 100
Ol. Ricini.....3iii to 3v
Spirit. Cini Rect. (80%).....ad 3iii
Aq. Cologn.....3p

The stronger brilliantine should be used in chronic cases, the weaker in more acute. If the application smarts then the pomade had better be used for a time. Occasionally, but rarely, cases will be met with in which all the above produce too much irritation; in such cases the following should be tried:

Hydrarg. Am. Chlor.....gr. viii
Adep. Benzoat. .....3i

It will generally be found advisable during the first week of treatment to reapply the ammonia and borax hair wash every other day; it is not necessary to wash with soap so often. Once or twice a week for the latter is usually enough.

After the first week once or twice a week is enough for the hair wash and once a week or fortnight for soap and water. These reapplications of the wash must be regulated by the reformation of scurf. The ointment, pomade or brilliantine should be applied daily for the first one or two weeks; then every other day, and later once a week according to the progress of the case. They must always be used directly after washing.

An essential detail in the treatment of seborrhoic eczema of the scalp is often neglected, i. e., the cleansing and disinfection of brushes and combs at the commencement of and twice weekly during treatment. Brushes and combs pick

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up particles of scurf laden with the germs of the disease and so can reinoculate fresh areas. It is not advisable to use carbolic acid for this purpose as a certain percentage of brushes are made with bristles which crumple up like a loopate after standing in carbolic lotion. It is quite sufficient to soak brushes and combs for 10 minutes in hot soda according to the domestic method of cleansing them and afterwards to rinse them well in several lots of cold water. Pillow cases, hats, wigs, etc., are similarly infected, but are less dangerous than brushes and combs which directly inoculate the epidermis. It is, however, advisable to have them carefully cleansed and disinfected by heat or formalin vapor.

**Treatment of Glabrous Skin Surface—Adults and Older Children, Not Infants.**

The varied types requires modification of treatment:

*First.* Cases with dry or slightly greasy scaling from slightly raised or nearly plane, somewhat reddened or yellow surface.

(1) Wash with superfatted soap and dry thoroughly.

(2) Apply an ointment, e. g.: (a) Sulph. Praecep., ʒp.; Acid Tannic, gr. xx; Adepis Benzoat, ʒi, or x. (b) Liq. Carbonis Detergens, ʒp.; Hydrarg. Am. Chlor., gr. x; Vaselin, ʒi; or (c) Resorcin, ʒp.; Sulph. Praecep. ʒp.; Lanolin, ʒvi; Ol. Oliv., ʒii. If, however, the signs of irritation are greater with a tendency to leeting Ihle's paste (p. 6) should be used until the acute phase has passed.

*Secondly. Cases without very acute signs but considerable scaling resembling chronic psoriasis.*

(1) Patient should soak in hot bath for ½ hour. It is better to add to each 30 gallons of water ¼ pound each of Tannic Acid or Borax. The scales should be scrubbed off, using soft soap if necessary.

(2) After drying rub the patches well with a test ointment, e. g., Acid Salicylic, gr. xxx; Liq. Carbonis Detergens, ʒp., Vaselin, ʒi. If the skin bears this ointment use the next day the following ointment:

| | |
|---|---|
| Chrysarobin | 3 to 6% |
| Icthyol | 4 to 6% |
| Acid Salicylic | 2.5% |
| Adeps Benzoat | ad 100% |

The weaker should be used at first, the stronger a few days later if a good reaction is not obtained. It should be applied twice daily; at first merely smeared over the patches, and later, if the skin bears it, rubbed in with a flannel. While using the Chrysarobin ointment the patient should wear a Jaeger flannel combination underclothing and be warned that all cotton or linen bed clothes, etc., will be permanently stained.

(3) After 4 days' use of the above ointment, or less if an acute inflammatory reaction is set up, the patient should take another bath.

During the Chrysarobin treatment the patient must be seen daily by the physician, and when the areas have lost all thickening, are surrounded by skin duskily congested with a Chrysarobin Erythema, the Chrysarobin must be stopped, a bath taken and another ointment substituted, e. g.:

| | |
|---|---|
| Sulphur Praecip | gr. xx |
| Acid Tannic | gr. xx |
| Adeps Benzoat | ʒi |

Or—

| | |
|---|---|
| Hydrarg. Am. Chlorid | v |
| Liq. Carbon. Detergens | ʒp |
| Vaselin | ʒi |

In other cases when after 4 days' treatment no distinct reaction is set up another 4 day's treatment with an increased strength of Chrysarobin should be practiced.

N. B.—Chrysarobin ointment should not be used on the head. The ointments already recommended for the scalp should be used, or any of those recommended for the milder skin cases (p. 10), increased in strength if necessary. In *very bad cases* the hair should be clipped close and Ung. Picis Liquid used. It is very important to *completely* cure every patch, in order to remove the danger of recurrences.

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*A third type of Glabrous Skin Eruption are the acute cases complicated with vesication, leeting, etc.*

(1) If very extensive keep patient in bed when possible for a few days, if irritation is intense sedatives may be required but rarely, e. g., Ammonium Bromide, Sulphonol of Phenacelin. Non-irritating fabrics should be worn next the skin (cellular flax fabrics, lawn, linen). Woolen undergarments should be avoided. If constipation exists laxatives should be administered. Alcohol must be avoided. In cases where patient is put to bed, after removing any crusts with boric starch poultices, the patient should be well dusted over from a flour dredger with a dusting powder and wrapped in well powdered sheet. A convenient dusting powder is:

Acid Boric.....3ii
Zinc. Oxid. (sifted).....3v
Amyli .....3iim
Or—
Acid Salicylic.....gr. x
Talc. Talv.....3i

When practicable, occasional baths of 2 to 5 ounces of borax in 30 gallons of hot are a great help.

(2) As the acute phase passes off a paste ointment should be used such as Ible's paste (page —) and when all leety and vesication has ceased and the dry stage reached the treatment recommended for the first type of scaly patches may be necessary to complete the cure. If the leeting and acutely reddened patches are localized Calamine lotion as follows is a suitable preliminary application:

Calamin. Praep.....3iii
Zinci Oxidi.....3ii
Glycerin .....3ii
Aj. Rosae.....ad 3iii

*Fourth type are cases resembling Pityriosis Rubra.* They should be treated—

(1) Tannic and Borax Bath (see p. 11).

(2) Inunction with Ungt. Glycer. Plumb. Subacet., i. e.:

1G.
Glycerin Plumbi. Subacet (P. B.)....3p
Vaselin Alb.....3iip

(3) After the case is reduced to localized areas treat as described for the first type.

*Seborrhoic Eczema in localities difficult to treat.*

*External Auditory Meatus.*

(1) Syringe away all debriis, e. g., Imparted, chippy or waxy cerumen, scales, etc., and per aural speculum carefully dry the meatus and if, as is often the case, a red or excoriated area is seen generally about the middle third of the meatus, it should be very carefully swabbed with a solution of $AgNO_3$, i. e.:

Argente. Nitrat.....gr. xii
Spirit Aether Nit.....3i

Care must be taken not to have too much on the swab or some may run down the meatus and irritate the intact membrana sympani. After this the patient should use a small quantity of an ointment of about 20 or 30 grains of Tannic Acid to the ounce. *Dr. G. Elliot* recommended a valuable spray for this purpose, i. e.:

Resorcin ..... 1 part.
Benzoinol .....99 parts.

*Umbilicus.*

(1) Clean out umbilicus with a solution of borax or if this fails cautiously use a swab moistened with Liquor Potassæ and immediately afterwards douche with boric lotion and dry carefully.

(2) Paint with the above solution of $AgNO_3$ in Spt. Alther Nit.

(3) Rub in an ointment, e. g.:

Acid Salicylic.....gr. xv
Sulphur. Praecip.....gr. xx
Vaselin .....3i

and apply more spread on lint and fix with a pad and bandage.

*Axilla.* Spread an icthyol, sulphur or tannic acid ointment on strips of lint and fit them over skin. (2) Keep above in their place by means of a lady's axillary dress protector with a pad between the wings and fix with a turn of bandage.

The Parasitic Hypothesis of the genesis of Seborrhoic Eczema demands a due consideration of its prophylaxis.

The following quotation from a recent series of paper on eczema deals with this subject:

The Prophylaxis of Seborrhoic Ecze-

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nia must be considered. It is one of the preventible diseases.

*A function of the sebaccous and other oily secretions of the skin is to cause an elastic cementing of the upper layers of the horny epidermis.* A variety of organisms constantly infect the skin surface. The horny layers of the epidermis, their constant surface removal and renewal from below, prevent the invasion of the living rete cells by organisms which would act as irritants. If, however, microscopic cracking, tilting and derangements of the surface cell layers is allowed, it affords the organisms an opportunity to penetrate the deeper layers. Such cracking, etc., is liable to happen round points where the intrinsic muscles of the skin are inserted to the epidermis, and where the residuals of the *panniculus carnosus* and extrinsic muscles throw the skin in and out of folds and furrows. In such places sebaceous glands are numerous or the coil glands have a large oil secreting function.

The removal of fat secreted by these glands is a source of danger, but if left on too long it may become a nidus and nursery for injurious organisms. A predisposing cause of parasitic forms of eczema may thus be too frequent or excessively vigorous ablutions, whereas, on the other hand, uncleanliness may be a cause. Among the cleansed classes of civilized mankind there is rather too much washing done at the present time. This evil is more marked among men than among women. The scalp with its numerous hair follicles and intrinsic muscles is especially liable to suffer from excessive washing, especially when no pomade is used. As a matter of routine adults ought not to wash the scalp more than once a week and after drying should use some pomade, especially if there is any tendency to dandruff. Of course one does not advocate the barbarous and filthy ways of 50 years ago, *viz.*, smearing a handful of hogs' fat over the hair shafts and trusting Providence to guide it to the skin surface. Pomade should be carefully applied in minute quantities to parting lines made along v or 4 zones of the scalp. The following is a suitable pomade:

| | |
|---|---|
| Sulph. Praecip. | 3 parts |
| Resorcin | 2 parts |
| Ol. Sheobromat. | 200 parts |
| Ol. Amygd. Dulc. | 400 parts |
| Ol. Rosae q.s. ut odor grat. | |

A brillianfine may be used instead, such as:

| | |
|---|---|
| Ol. Ricini | 3v |
| Resorcin | gr. xx |
| Spt. Vini Rect. (80%) | ad ʒiii |
| Easi. Cologn | 3p |

The deeper layers of the epidermis are often inoculated with disease by hair brushes and combs. Attempts are made to remove scurf by vigorous brushing or tooth comb scratching. Orangisms on particles of scurf are inoculated all over the scalp, and a fresh outbreak of dandruff is the inevitable result. One may almost say the less the hair is brushed and combed the better, but in this as in other good and bad things there is a medium. Hair brushes should be soft; comb teeth widely separated and well rounded. Hair dressers' brushes, especially the abominable machine brush, must be avoided; when going to a hair dresser, one's own brush and comb should always be taken.

Head clothing is a common predisposing factor of Seborrhoic Eczema. Seborrhoic organisms, like many bacteria, flourish under conditions of darkness, warmth and moisture. Many head dresses supply these conditions. A hat should be light, in temperate climates permeable to light rays, and should allow currents of air to flow in and out. Moreover, it should be worn as little as possible. The old-fashioned chignon of 40 years ago, a poultice for fomenting the growth of germs, is the cause of many old ladies wearing wigs at the present day.

Brushes and combs should be frequently washed in hot soda and water. The first sign of dandruff, however slight, should be promptly treated.

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# Technique of Stomach Examination

By Samuel G. Stewart, A. M., M. D., Topeka, Kan.

Professor of the Principles and Practice of Medicine and Clinical Medicine in the Kansas Medical College.

The technique of stomach examination is so simple that any physician should be able to become master of what is now known of the methods in practice.

Methods of stomach examination are external and internal. By external, we mean inspection, percussion, palpation and auscultation. By internal methods, we refer particularly to the various tests and examination of the stomach contents through the use of the stomach tube.

Perhaps the test most frequently used is that of the test meal. After two or three hours after the ingestion of this meal the contents of the stomach are withdrawn and examined in order to determine whether the fermentation has been decomposition by putrefaction or whether by the digestive ferments.

To determine the power of absorption of the stomach the iodide of potassium test is the one most frequently used. A five grain capsule of the iodide of potassium is taken into the stomach, and after an interval of fifteen or twenty minutes test paper is moistened with the saliva of the patient, a drop of fuming nitric acid is placed on the moistened test paper, and if iodine is present a blue reaction appears. Many conditions of the stomach may interfere with this test and prevent its success. The glandular structure may be covered with thick mucus as the result of degenerative processes in the glands of the stomach, for example, so this method cannot be depended upon as a perfect test of absorption. If the stomach were washed freely by siphonage before making this test the results obtained would be more reliable.

The salol test is employed to determine the motility of the stomach. The particular value of salol in this test is due to the fact that it is not dissolved or split up by the stomach juices; but after passing over into the intestinal tract and absorption takes place, a urine test will determine whether the salol has been acted upon.

An obstructed pylorus and a dilated stomach would prevent the success of this test because the contents would be in a state of putrefaction and because of stenosis of the pylorus passage into the intestines would be prevented and the test rendered valueless. A catarrhal inflammation of the intestines and obstruction of the biliary and pancreatic ducts would have the same effect.

Concerning the size of the stomach, this may be determined in various ways. The methods most used are those of the water test and distension by gas. The introduction of a rubber bag distended with gas will show the size of the stomach. Water poured into a stomach that is seriously diseased would be objectionable and possibly dangerous.

The length of time that food remains in the stomach and the progress of digestion give us more information concerning the motility of the stomach; and the character of the contents that are withdrawn by the tube is a better guide of the degree of absorption than any other tests.

Palpation is of the greatest importance in determining the presence of tumors of the stomach. By the electric light as used by Dr. Einhorn, tumors may be easily outlined when situated in the anterior portion of the stomach.

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# CURRENT MEDICAL LITERATURE.

### OPERATION FOR HARE LIP.

James Parrott, in the *Charlotte Medical Journal,* declares that the separation of the cheek from the bone is unnecessary. How this idea ever possessed the thinking surgeon is hardly conceivable. Almost every text-book on surgery advises it, and nearly all surgeons actually do it. In my judgment it should be abandoned. The author has not lossened the cheek for twelve or fourteen years, not even in extreme or very hideous complete double hare lips with projecting intermaxilary bone. He has not seen the necessity for it, never has regretted not doing it, and on the contrary has been highly pleased that he did not do it. By careful mortising the edges, all tissue of any service can be saved and utilized to great advantage. This is difficult and tedious in most cases, and especially so with double harelip. If any tension exists after the operation is complete, it can be relieved by the proper application of adhesive plaster. The author emphasizes the fact that loosening the cheek is not necessary to prevent or lessen tension—the only purpose of cheek-separation.

The preparation necessary for this operation is very simple. Parrott prefers the administration of a mild cathartic 48 and 24 hours previous to the operation. The mouth, nose and cheeks should be cleansed the day before and the morning of the operation with a mild alkaline antiseptic, or a saturated solution of boric acid. The lips possess great resistance to infection and heal very promptly and satisfactorily, even under the most adverse conditions. The dressing should be very simple, a superabundance is not only needed, but is really disadvantageous. A light, small, strip of sterilzed gauze should be placed on the wound—just large enough to cover it—and a Z. O. adhesive strip applied.

The proper application of the adhesive is the most important single step in the entire after-dressing, and is of equal importance to the correct paring and mortising of the lip. Taylor's method is very good. Mumford's "butterfly" strip is commendable. Neither of these is best unless the cheek be loosened during the operation. In my procedure both are unnecessary. The author prefers, and very decidedly, applying two narrow strips placed across the wound over the entire extent (of course in the same direction) of the zygomatic muscles, and reaching below the corner of the mouth on the opposite side, and rather tightly drawn. This contracts the zygomatic muscles to a great extent, and prevents undue tension on the suturs. This simple dressing should be changed, and the wound, nose and mouth lightly irrigated with boric solution every other day for about ten days. The face should be fixed with adhesive a few days longer. Taylor's method is very good at this point.

### HEART DISEASE IN PREGNANCY.

Moran, in the *Journal of Obstetrics of the British Empire,* refers to the dangers accompanying pregnancy in the subject of organic heart disease. While the prognosis is always grave for the mother and child, the result in a given case depends upon the valves affected, the amount of compensation, the condition of the heart muscle and the general state of the patient. Crippled placental circulation is responsible for abortion in the early months, while asphyxia, often fatal to mother and child, may occur during labour. Post partum hæmorrhage and pulmonary œdema may cause death immediately after labour, while owing to diminished resistance acute endocarditis may supervene if puerperal infection occurs. The nature of the cardiac lesion

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has considerable influence on the clinical phenomena observed; mitral insufficiency predisposes of œdema and asystole; aortic insufficiency to syncope and epistaxis; mitral senosis to cerebral embolism, hemiplegia and postpartum hæmorrhage. He says that pregnancy and parturition are dangerous to the cardiopath, and reports seven cases occurring in his own practice. In the management of the cardiopath, attention is drawn to the importance of careful and continual observation, and of guarding the patient against excitement, over-exertion, excessive exposure to cold. The skin should be kept active by a daily tepid bath and the bowels and kidneys carefully regulated. Pulmonary and renal congestion are to be guarded against by the wearing of proper clothing and the avoidance of sudden chills. When compensation fails he advises the usual medical measures, reserving induction of labour until viability of the child is reached. In the conduct of labour he advises a hypodermic of morphia during the second stage, with artificial assistance so as to avoid shock and sudden lowering of blood pressure. Immediately after delivery a sand-bag should be placed on the abdomen to guard against the latter danger. The placenta should be allowed to be expelled spontaneously and no friction or kneading of the uterus practiced, but free bleeding favored to relieve the disturbed circulation. Ergot must not be given. In regard to the cardiopath, the author is in full accord with the dictum of Peters: "No marriage for the unmarried, no pregnancy for the married, and no nursing for the confined."

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## A NEW IODINE SOLUTION FOR SKIN.

Ellice McDonald, in the *Medical Record,* states that after Heusner, in 1906, first reported the good results with his solution of 1:1000 iodine in benzine, he began a series of experiments to obtain a comparatively unirritating solution of iodine in a fat solvent in greater proportion than 1:1000. Benzine will not take up more than that amount, and the solvent itself is rather irritating to the skin. After a number of experiments with various solutions and combinations of alcohol, chloroform, benzine, acetone, ethylene dichloride, toluene, glycerin, and carbon tetrachloride, the following mixture was found to be the best: *Iodine, 2 parts; carbon tetrachloride, 98 parts.* This solution has been used in my work for three years in abdominal operations with uniformly good results and without any skin suppurations whatever. The abdomen is shaved the night before operation and washed with gauze (no brush), and an antiseptic soap, such as mercuric biniodide soap or a formalin soap made up of 5 parts of formalin to 15 parts of benzine and 80 parts of tincture of green soap. A soft, dry, sterile towel is then applied over the field of operation. At the operating table this towel is removed and the carbon tetrachloride-iodine solution is swabbed on the skin surface of the abdomen, and rubbed into the skin with a piece of gauze for between one and two minutes, the time being taken by the anesthetizer. The mixture dries readily, leaving the skin ready for the incision. This mixture combines the advantages of Grossich's tincture of iodine method and v. Herff's[15] alcohol-acetone method of disinfection of the skin. The carbon tetrachloride is a fat solvent, which alcohol is not, and the addition of the iodine makes it a more powerful antiseptic than the alcohol-acetone of v. Herff. Carbon tetrachloride is in itself an antiseptic of considerable value and is useful in preserving urine in place of chloroform, and has been used to preserve diphtheria antitoxin. Carbon tetrachloride ($C Cl_4$) is a heavy anesthetic liquid, not unlike chloroform, with considerable odor, and a fat solvent. It does not burn or explode and is comparatively unirritating. The author's attention was

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first directed to it by advertisements of a cleansing solution for taking grease spots from clothes, advertised under a trade name which is a corruption of the first part of its name, and as a substitute for explosive benzine.

The advantages of the carbon tetrachloride-iodine mixture are its simplicity and fat-dissolving properties. If used repeatedly upon the hands, the skin will become dry and peel off, but this will not happen unless there is repeated application, and McDonald uses it after his hands have been in pus, or after a pus case has been operated upon, to be sure of complete sterilization. For constant use as a hand disinfectant, the iodine must be reduced and some lotion or oily substance, as lanolin or cold cream, rubbed into the skin of the hands after operating. Carbon tetrachloride is not expensive and costs in the neighborhood of two dollars a gallon, and three ounces is sufficient to prepare the abdomen for operation.

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## NITROUS OXIDE AND OXYGEN.

Williams, in the *California State Journal of Medicine,* thus sets forth the advantages and disadvantages of this mode of anesthesia for prolonged operations:

**Advantages.**

There is a great decrease in postoperative nausea and vomiting. Teter had in 13,000 cases only five who vomited continuously after nitrous oxide, the longest case lasting only six hours.

Surgical anesthesia is attained in from two and a half to four minutes.

There is almost immediate recovery after the gas is discontinued.

During the operation the patient has no mucus, rarely vomits, and the tongue never falls back.

It is ideal in obstetrical work, as it causes analgesia or even anesthesia, without muscular relaxation. It acts rapidly and is eliminated rapidly.

It will probably be a great advantage in thoracic surgery, as it has been used with success experimentally on animals.

Nitrous oxide and oxygen is the safest known anesthetic. Bevan estimates the death rate to be one in 50,000, while the death rate from other anesthetics ranges from one in 10,000 to one in 15,000.

**Disadvantages.**

It is expensive, costing from $6 to $9 per hour for material. The rebreathing method used in 700 cases recently at Johns Hopkins Hospital greatly reduces the cost.

It requires a special apparatus.

There is much more muscular rigidity than with ether, but morphine and small amounts of ether overcome it when present. Some surgeons learn to accustom themselves to it on account of the improved condition of their patients.

There is some danger from suboxidation, and venous congestion in certain cases, as in alcoholics and obese men.

It is contraindicated in serious heart conditions on account of the increased work put on the right heart from venous engorgement if any cyanosis is present.

It requires more skill to administer than other anesthetics. To quote from Crile: "It has certain dangers which are almost wholly in the hands of the skilled anesthetist; it is not the anesthetic of choice for the unitiated, but only for the highly trained anesthetist."

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## GETTING PURE MILK.

John Lee Coulter, in the *Northwestern Lancet,* points out that the dairymen who wish to do what is right must be helped; the same as a child who wants to learn to write must be shown how. Education for the mass of sensible producers must be supplemented by laws for the prosecution of those who refuse to live up to a certain standard, the same as in the case of our pure-food law.

If good milk is produced, the rest is comparatively easy. But the writer, be-

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cause he has lived for many years on Minnesota farms, because during the last year he visited the barns of a great number of farmers and dairymen and discussed the question with the producers, and because he has made a series of every careful estimates of the cost, is confirmed in these views: first, that the consumers must make insistent demand for a better product or they will not soon get it; second, that they must show their desire for it by being willing (by passing laws and by being taxed to supply the money) to help to get rid of the undesirable cows; third, that they must show their desire by carrying on a movement of education among the producers who do not understand, and by prosecuting those who persist in dirty methods.

If consumers really want sanitary milk, one of the first moves would be to see that the stables kept by hospitals are sanitary. This is surely as important as carrying flowers to the patients; yet the writer has visited such stables and has found some as bad as that of many dairymen.

If they really want sanitary milk, another early step is to clean up the stables behind their own houses in the cities. As a general thing these stables, with one, two or three cows, are in a worse condition than is found in the average dairy or farm.

If those who do not keep cows want sanitary milk, let groups of twenty-five or fifty in a locality agree to pay a cent a quart higher to some dairyman if he will improve his quality, and let them send their own inspector out from time to time. A few months would show the wisdom of this step. Or, again, if they want this good milk, let one hundred families purchase or establish a small dairy to supply their needs. If they would establish a clean dairy they could easily dispose of the surplus milk at a profit. When consumers get rid of their false notions of economy, when they demand sanitary milk, they can get it for what it costs, including such a profit as is now added.

Many farmers would be glad to produce more sanitary milk, to introduce cleaner methods, and to be surer of the health of their cows, if the consumers only appreciated what it meant. But the consumer must be willing to pay for a better product. No farmer or dairyman can introduce these reforms and compete with another who does not go to any extra expense.

In conclusion, the author urges that the demand must come from those who use the dairy products. Just as they have demanded pure-food laws and other reforms and have commenced to get results and are paying for them, so, too, they must demand not only good weight and measure, and no adulteration, but also a product from a healthy cow secured according to good rules of cleanliness.

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## PROTEID IN INFANT FEEDING.

D. J. Milton Miller, in the *Interstate Medical Journal,* emphasizes the great importance of a sufficiency of proteids in the infant's dietary; to show how frequently infants suffer from a want of this element, because of the misconception (still prevalent) that it is the casein of cow's milk which is the most injurious to, and difficult to digest by, the human baby; that this idea had its origin in the belief that the curds commonly seen in the infant's stool were undigested casein, while, in reality, in the majority of cases, they are composed of fat—although casein curds do occur; that this belief has led physicians in the past, and is still leading them, to feed babies with low proteids or upon proprietary foods deficient in this element; that fat is better tolerated before the sixth month than after, in winter than in summer, is the cause of a peculiar form of constipation, and is partic-

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ularly obnoxious in all acute digestive disturbances, and may provoke a definite and often severe train of symptoms due to acidosis; that a deficiency in proteids is a common cause of mal-nutrition, rickets, scurvy, anemia, feeble circulatory, digestive and assimilative powers and constipation; that normal or increasing weight may occur with deficient proteids, and, with constipation, is frequently an early sign of rickets; that when these symptoms occur, the proteids should be increased, often with diminution of the fat, especially if there is constipation, or if there is diarrhea with fatty curds; that when increased amount of proteids are indicated, but apparently not tolerated, even though the fat be reduced, resort should be had to peptonization and digestive tonics,—although it will repeatedly be found that perseverance in the increased proteids will frequently cause the apparent evidences of their injurious influence to disappear; that buttermilk is a convenient medium for exhibiting the proteids; when they are otherwise not well tolerated; that the stools may be practically disregarded, so long as the infant is gaining regularly and developing naturally; and, finally, as will have been observed by those who have grasped the full significance of these remarks, that simple dilutions of whole milk with cereal decoctions, and the addition of sugar, are sufficient, in very many cases, for the successful nourishment of infants.



## GONORRHEA IN WOMEN.

J. L. Peck, in the *Hahnemanian Monthly,* admonishes that instrumentation should not be resorted to for fear of carrying the infection higher up into the cervix, endometrium and tubes, and producing serious extension of the disease into these and other parts. Coitus should be prohibited, and the patient instructed as to the manner of preventing the conveyance of the disease to other parts and persons. Such internal medication as required to relieve the pain and irritation of the parts affected should be prescribed. The external parts should be bathed two or three times daily with a boracic acid solution, or other mild antiseptic, and clean pads applied frequently.

In sub-acute and chronic cases the most effective treatment is the local application of silver nitrate, ten per cent solution. Great care should be taken to see that all the folds and crevices of the vagina are thoroughly treated, and if the cervical canal has been infected, applications of silver nitrate should be made within the canal. Following this treatment the vagina should be well smeared with vaseline and packed with cotton or gauze, or a tampon medicated with ichthyol and vaseline, or ichthyol and glycerine, ten per cent, is placed in the vagina. The packing or tampon is removed in forty-eight hours and douches of permanganate of potassium one to five hundred, or creolin, or bichloride of mercury one to four thousand. The local treatments should be applied two or three times a week with the daily use of antiseptic douches when the tampons are not in use. Protargol ten per cent, or argyrol twenty-five per cent may be substituted for the silver nitrate, but the latter are not as effective in destroying the bacteria. Where the urethra is involved a Kelly's urethrascope should be introduced to within a short distance of the bladder and application of solution of silver salts applied the entire length of the urethral canal. It may be advisable to use ten per cent applications of cocaine in the urethra in painful cases prior to these applications. The ducts of Skeenes or para urethral ducts, and Bartholinian ducts, if involved, are treated by pressing out the purulent discharge and using injections of silver salts with the aid of a blunt pointed syringe. In obstinate cases these ducts should be incised freely under local anaesthesia and thoroughly cauterized.

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### "DONT'S" IN THE USE OF 606.

The *Journal of the A. M. A.* offers the following advice in the use of salvarsan:

The most recent advice from authoritative sources as well as our own experience, favors, in general, the employment of salvarsan by intravenous injection.

1. Don't use salvarsan in myocarditis, in advanced cases of tabes dorsalis and general paresis, in nerve syphilis affecting vital centers, in grave kidney disease, in cachectic and debilitated persons (unless the condition is due to syphilis), in aneurysm, in optic neuritis, and in persons with lesion (such as gastric ulcer) in whom increased blood-pressure may produce hemorrhage.

2. Don't use intravenous injections of salvarsan until you have fully qualified yourself and possess a detailed knowledge of the technic. Deaths have occurred and more will occur from unskilful administration.

3. In the preparation of the drug for intravenous use, don't use a solution made with common salt or undistilled water (such as is often supplied in hospitals), but use a specially prepared sterile physiologic salt solution made with chemically pure sodium chlorid; otherwise you may find it impossible to obtain a clear solution.

4. Don't under any circumstances inject into the veins a solution which is not *perfectly clear;* a flocculent or cloudy liquid may produce alarming symptoms of collapse or even death.

5. Don't use a solution any more alkaline than is absolutely necessary to secure a clear solution.

6. Don't inject the salvarsan into the veins without previously running in physiologic salt solution; if the needle is not in the vein you will infiltrate the surrounding tissue with the salvarsan solution and cause subsequent inflammation and unnecessary pain.

7. Don't infuse the solution into the vein too rapidly; it is best to have a needle of such a caliber as will require eight minutes to introduce 200 c. c. of fluid. With the gravity apparatus, the rapidity of inflow can also be governed by the heights of the receptacle.

8. Don't infuse a cold solution; the liquid should be about the temperature of the blood.

9. Don't use "glass pearls" in the mixing jar, as is often recommended; we have found that minute particles of glass chip off, which might cause embolism.

10. Don't use a routine dosage of the drug; the dose should be gauged according to the weight of the patient and the character of the condition to be treated.

11. Don't employ intravenous injections in your office or in a dispensary. The patient should be treated in a hospital and put to bed and carefully observed for a period of not less than three days.

12. Don't persist in the intravenous injection if the patient should show signs of collapse during the administration, but stop at once.

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### ELIMINATING THE ANESTHETIC.

Blain, in the *International Journal of Surgery,* cannot understand why patients should not be allowed fluids after operation. It is merely one of the traditions which have been so long handed down. Yet we see nurses busily watching patients to see that they do not steal water from a hot-water bottle or bag, under the supposition that this would be very detrimental. When we consider that the mode of elimination of the anesthetic is to no small extent by way of the gastric mucous membrane, it is quite easy to understand that any means which aid in its removal will be of benefit. This end is accomplished by lukewarm water or a glass of water contain-

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ing ten grains of sodium bicarbonate, or a cup of black coffee administered shortly after the patient comes out of the anesthetic. As a rule, nausea and vomiting, which would ordinarily continue from twenty-four hours to two or three days, can be entirely done away with.

Some have advocated the washing out of the stomach at the completion of the operation by means of the lavage tube. This method is open to two objections: First, the danger in passing the tube with the patient anesthetized (the author has known of one death by this method), and, second, because it is best that a patient should be fairly out of the anesthetic at the completion of the operation. However, it is often necessary, in order to relax the jaws sufficient to permit the passage of the tube, to administer more ether.

In most cases where the pulse is weak, the best results are to be obtained by saline solution given by one of the several routes—subcutaneous, rectal or intravenous. This, coupled with heat externally and other mechanical means, will eventually supplant the giving of whisky, strychnine, nitroglycerine, etc., under the guise of stimulating the heart. Saline solution is at present the best means at our command to replace the lost blood, combat shock and aid in diluting toxins and eliminating the waste products from the body. Its employment by the drop method is also advantageous after a large percentage of operations—even though shock is not extreme, and aside from its well-known use in peritonitis—to relieve the thirst and aid in restoring the patient.

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## QUANTITY OF FOOD FOR INFANTS.

Copeland, in the *Virginia Medical Semi-Monthly,* sums up this question as follows:

A determination of the total amount of food required in a given case is of great importance, for the reason that in depending upon clinical observation, the harm is oftentimes done before the error in diet is fully appreciated. Such a determination has been satisfactorily worked out for man, and owing to the balance between the protein intake and nitrogen excretion is not difficult. With the infant such work has been especially difficult, from the fact that the rapidly growing organism requires a supply of protein far above what is shown by its nitrogen excretion. Forty calories per pound of body weight for each twenty-four hours is the average need. Now, having prepared a food acceptable to the infant, with a proper nutritive ratio, the estimation of its caloric value is not troublesome. A comparison of such value with the infant's requirements is important in determining a minimum energy value, below which we may not safely continue for any length of time.

Having satisfied ourselves as to the amount of food required in twenty-four hours, it must then be determined what quantity is to be used at a feeding and what interval there must be between feedings. Conclusions must be based upon the character of the food, the age of the infant and the capacity and muscular tone of the stomach. The infant's stomach empties much more quickly after a feeding of human milk than after any other possible nourishment. The acidity of the gastric juice is largely dependent upon age, and the influence of acid in retaining food for gastric digestion has been pointed out. Stomachs deficient in motile power as the result of faulty feeding or disease require time to evacuate their contents.

Fortunately, the healthy infant, like all other healthy young animals, adapts itself readily to altered environment, including food, if due time is given; otherwise, our efforts could never meet with success. We must bear in mind that any artificial food, no matter how scientifically worked out, is essentially foreign and may give trouble. Finally, we must

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remember that what meets indications in one child will fail with another under apparently the same conditions, so that in so far as it is possible we must arm ourselves with such knowledge as will enable us to interpret alike the causes of success and failure.

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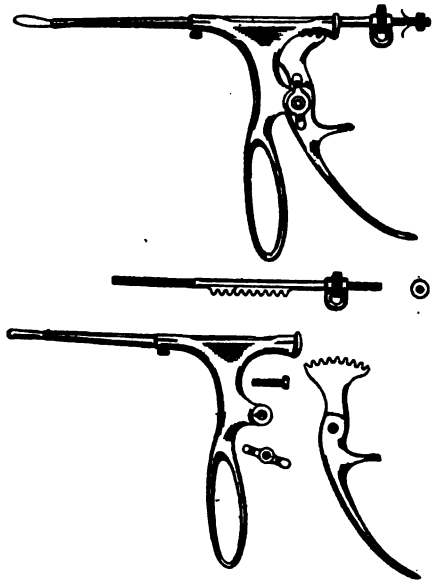
### AN IMPROVED TONSIL SNARE.

William D. Black publishes a device of his in the *Journal of the A. M. A.*, and the instrument and its various parts are so well shown in the illustrations that no further description is necessary. It is a more powerful instrument than



the ordinary tonsil snare and does not get out of order like many others. It is simple in application, can be used a number of times without requiring a new wire, and, if properly adjusted, the wire cannot slip. It should be manipulated by a sort of forearm and wrist movement, instead of by the fingers, in closing it, so that the barrel will not be thrown out of line. It is made of solid brass with a heavy nickel coating. Number 7 or 8 piano wire should be used.

### THERAPEUTIC POINTERS.

The *Clinical Reporter* gives the following miscellaneous hints which may prove useful to many practitioners:

A full dose of ergot, administered as soon as the uterus is empty, will do more in the way of preventing puerperal sepsis than all the antiseptics that can be applied to the parturient tract.

Exposure lowered the bodily resistance and the pneumococcus invaded the system, overcame the organism and caused the patient's death. Is this any different in meaning or result than the old-fashioned statement, "He caught cold, took pneumonia and died?"

Eryngium Aquaticum in doses of one-half grain administered three times daily has repeatedly cured cases of spermatorrhea after all other remedies and measures failed to give permanent relief.

Don't load your "grippe" patients up on "coal-tar" products, depressants and massive doses of quinine, if you would have fewer sequela of pneumonia, middle ear diseases and protracted convalescence.

Aconite is the first aid to the injured; whether this injury be done by the surgeon's knife or a railway wreck, or exposure to the elements. Sometimes it is the only one needed, but to be of any value it must be used early.

Apocynum Cannabinum, the "vegetable trocar," is one of the best remedies at hand in cases of anasarca due to heart or kidney lesions. It is of little value, however, in dropsy due to obstruction of the portal circulation.

The neurasthenic whose condition is due to "wild oats," of which he is reaping a bountiful crop, will be immeasurably benefited by the use of *Avena Sativa*. It is one of the few remedies that is best given in hot water and is also of great value after the excessive use of morphine.

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## IMPORTANCE OF NASAL BREATHING.

Schmitt, in the *New York Medical Journal,* points out that the volume of air passing through the nasal fossæ from infancy onward exerts marked pressure on all the structures within the nose, pushing the lateral wall outward and the floor downward sufficiently to give the space required for the growing capacity of the lungs. The low floor corresponds to the properly flattened roof of the mouth, the wide alveolar process allowing the teeth to develop without crowding. The air normally conducted through the nose and nasopharynx will produce sufficient pressure to support the vessels in the adenoid tissue normally present in the nasopharynx and hence keeps its growth within bounds. The nasopharynx is commodious, gives the palate a wider range of motion, and adds to its mobility.

To overcome the resistance offered by the comparatively small entrance which the anterior nares present for the large quantity of air to fill the lungs, the muscles of respiration are brought into play for the uniform expansion of the entire chest and lungs. A great quantity of blood is thereby drawn into the chest which bathes the lung tissue, thereby tending to preserve its healthfulness and also to increase the exchange of gases, and hence establish better metabolism throughout the body.

Against all this let us compare mouth breathing. The neglected nostrils are collapsed from disuse. The absence of air pressure within the nose has permitted the fossæ to remain narrow. If they are sufficiently roomy the mucous membrane covering the turbinals is swollen from nonsupport. From the same lack of pressure the floor of the nose has not been depressed, resulting in the high vaulted palate, the contracted alveolar process, and irregularity in the position of the teeth. The upper jaw and lip are pushed forward and the lower lip droops and is thickened.

At this point the author takes exception to the accepted theory of Lombroso that the vaulted palate is a distinctive mark of degeneracy and substitute the above explanation as the true cause of that deformity.

In those in whom there is an abundance of adenoid tissue lining the nasopharyngeal wall, the vessels of this tissue being unsupported are continually in a congested state. Added to this is the negative pressure or suction resulting from the air sweeping through the mouth down the pharynx, constituting a second factor in the production of hyperæmia of the adenoid tissue, both factors resulting in the true cause for the superabundant growth of that tissue. The adenoid tissue which occludes the postnasal space interferes with the proper aeration of the middle ear through the Eustachian tube producing defective hearing and interferes with the proper function of the soft palate which so often is manifest in young children and frequently is the only cause for their defective speech. With the disturbed circulation in the nose and nasopharynx the circulation at the base of the brain is affected, influencing the mentality of the mouth breather who frequently is put down as a dullard at school.

The dust laden and infected air passes through the mouth, producing dryness, infecting, and inflaming the tonsils and pharnyx, eventually permanently enlarging the tonsils through repeated insult and increasing liability to circumtonsilar infections. On account of the large opening which the mouth presents, no extra effort is required during inspiration, as is the case when the resistance of the smaller aperture of the interior nares must be overcome; hence the muscles of the chest are not brought into play as in the former instance, the chest remains contracted, and the lungs incompletely expanded and aerated especially at the apices. The increased amount of blood which should normally

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enter the chest does not enter, leaving the lungs in an anæmic condition oftentimes unable to cope with the germs which enter with the dust laden air. The air passing into the lungs is cold, unfiltered and unmoistened, chilling the lung, affecting its lining membrane and circulation. The deposit of dust which might contain noxious germs in great numbers and too numerous to be taken care of by reduced circulation, frequently results in inflammation and tuberculosis of the lungs.

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## MUCO-COLITIS.

L. Veale, in a paper in the *British Medical Journal,* on the treatment of muco-colitis, regarded the condition as a secretion neurosis, and attributed the general symptoms to auto-intoxication following the putrefaction of food particles entangled in the retained membranes. The presence of the membranes also led to spasm and distention of the intestines, so that a vicious circle was set up.

In the treatment as carried out at Harrogate the bowel was irrigated three times a week with about 30 ounces of the alkaline sulphur water, which was run in very slowly through a Plombières tube at a temperature of from 96° to 102° F. from a height of 2 feet. The patient lies first on her right side, then on her back, and then on the left side, remaining in each position for two minutes. The fluid was retained for ten minutes, and after it had been ejected the process was repeated. The attendant examined and reported on the washings. The irrigation was followed by a warm sulphur bath with a submassive douche to the abdomen. If constipation was present a small dose of blue pill was given at night, and the hot sulphur water in the morning. The result of this treatment was great improvement in the local and general symptoms. Sometimes more than one course (of about three weeks' duration) was necessary, or the patient could be taught to irrigate the bowel herself, using artificial sulphur waters; while massage could to a certain extent replace the submassive douche. The diet prescribed was one that left no irritating residue. Fat, pastry, and all green vegetables (except spinach) were prohibited. The patients should take moderate exercise. Drugs were avoided as much as possible, though sometimes a tonic or the iron waters were given. All pelvic disorders received their appropriate treatment. Savill used very large intestinal douches in the treatment of muco-colitis, beginning with one and increasing to five or six pints. The sense of exhaustion that followed was removed by the subsequent application of the high-frequency current. With regard to diet, the speaker recommended cutting off all meat proteids, and giving farinaceous food and milk for a week or ten days, then cream cheese and milk only for a few days, after which a return should be made to the farinaceous diet. Some patients did well on lactic-acid milk. The importance of treating constipation was emphasized. Pituitary extract had been found useful in some atonic cases.

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## HYDROGEN PEROXIDE IN PURULENT CYSTITIS.

A. Weith in *Semaine Médicale,* describes a troublesome case of purulent cystitis in a man of 84 years. Boric acid injections, and afterwards silver nitrate, had no effect. The bladder was then washed with 200 grammes of dilute hydrogen peroxide (2 volumes), with immediate good result. A slight sensation of heat was produced, without any pain, and the amelioration was so marked that nothing more was done for several days. Then the injections were renewed with 3 volume solution at intervals of increasing length, until finally the urine became clear and the patient was eventually cured.

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# THE DOCTOR HIMSELF.

## MEDICINE IN THE ENCYCLOPEDIA BRITANNICA.

The *Lancet* makes an interesting review of the biographical mention given to medicine in the new edition of the Encyclopedia Britannica.

The article on Galen is unsigned, and is by no means complete, but the details of his life and work are, it is said, to be found in the section dealing with the history of medicine, which has not yet appeared. Possibly this accounts for the omission of any mention of the commentary of Haly ben Rhodoan, by which Galen was known in the Middle Ages through the medium of a Latin translation from the Arabic. Of Celsus there is no mention, neither does the name of Gilbertus Anglicus appear. But it may be expected that the names of both these physicians, together with that of Gaddesden, the first English court physician, will be dealt with in the section containing the history of medicine. The account of Hippocrates has been already alluded to in our article on the section of Anatomy, published in *The Lancet* of Feb. 25th.

Three of the greatest names in the history of British medicine are those of William Harvey and the two Hunters, William and his brother John, for to their discoveries in physiology, anatomy, and pathology respectively it may almost be said that the first real advances in medical science since the days of Galen were due. The articles dealing with these three great men are models of scientific biographies, clear, complete, and eminently readable. That on Harvey is contributed by Dr. P. H. Pye-Smith, who gives an excellent account of Harvey's career and of his great work on the circulation. Harvey's views on the movements of the heart and blood were first put forward in a series of lectures delivered as Lumleian lecturer in 1616, but the publication of the "Exercitatio did not take place until 1628. His own colleagues were convinced of the truth of his theory, but in foreign countries, as might be expected, the novelty met with disbelief and occasionally with active opposition, although the opposition as a rule was of a feeble and pretentious nature. Great minds, however, accepted Harvey's discovery, and among these the most eminent was Descartes. Dr. Pye-Smith gives due credit to Servetus for his views upon the pulmonary circulation. Harvey's only other important work, that on generation, was published in 1651. Little is known of Harvey as a practicing physician, but Dr. Pye-Smith quotes an amusing passage from Aubrey to show that his prescriptions were not held in much esteem by contemporary apothecaries. Apothecaries in those days used to collect physicians' prescriptions and sell or use them to their own profit. "But," says Aubrey, "I knew several practitioners that would not have given threepence for one of his bills"; and, "a man could hardly tell by his bill what he did aim at." It is to be hoped that this was due, not to any inadequacy in the prescriptions, but to their being of a simpler nature than was the usual custom of the time. The appended bibliography of Harvey's own writings and of literature concerning him, though naturally the latter section does not pretend to be complete, is of great value, but we think that among the Harveian orations which Dr. Pye-Smith mentions the admirable one by the late Dr. J. F. Payne, entitled "Galen and Harvey," should have been included.

The biographies of John Hunter and of his elder brother William form a valuable chronicle of the lives of these two illustrious workers. William Hunter,

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owing to the overshadowing fame of his brother, is, perhaps, not remembered so vividly as he should be, for his work in anatomy, and especially that upon the anatomy of the gravid uterus, was of the greatest value. The memory of John, on the other hand, is kept green before the eyes of all men by the museum called after his name and by the yearly oration, an admirable example of which, delivered by Mr. Edmund Owen, was published in our issue of Feb. 18th last. The biography now before us, from the pen of Mr. F. H. Butler, gives an admirable account of the life and works of Hunter, of his industry, his method of testing hypotheses by experiment, his many-sidedness, and his great discovery of tying a main artery in its continuity. Of his passion for work an amusing hint is given in one of his letters to Jenner, who had written to Hunter bewailing a disappointment in love; Hunter replied, "Let her go, never mind her. I shall employ you with hedgehogs." He was at the time making researches into the phenomena of hibernation, and evidently considered that if anything could mend a broken heart the study of the hibernating hedgehog would be the best prescription.

Sir William Thiselton Dyer gives an excellent sketch of Huxley, although it deals mainly with the pugnacious and controversial side of his character. No one unacquainted with Huxley's private life would gather from this article what a tender humorous side there was to the character of a man only known in public as one who never spared an opponent when the opponent was in the wrong. But as a picture of the biologist and the expert upon education the article is as clear cut as Huxley's own writings.

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### THE DOCTOR'S TOP HAT.

Not so very long since, says the *London Hospital Journal,* even in rural districts, the medical man was easily recognizable to the stranger by his professional top hat and frock coat. Scarcely fifteen years ago the doctor was almost as unmistakable as the clergyman. There were few then who dared to break away from the conventional costume decreed by unwritten professional law, and those who did defy this canon generally suffered for their hardihood. Except perhaps in the height of summer the silk hat was almost obligatory upon the doctor, as much in small country towns as in London and the large cities. But within the past dozen years a complete change has come over the country practitioner's costume; and the main cause of this revolution has been the advent of the motor-car. Except in larger towns the doctor's motor-car has killed the doctor's top-hat; and public and profession alike have accepted this change with equanimity. But there must be many old-fashioned country people who have experienced a real sense of loss in the passing of their doctor's professional uniform. And, indeed, with all its obvious faults, the top hat and its associated coat often seem to lend some additional dignity and impressiveness even to the most dignified and impressive members of our profession. The doctor above all men should pay great attention to his outward appearance—"for the apparel oft betrays the man." It is not humbug or charlatanary which impels him to look well-dressed and well groomed on all occasions; and this effect was certainly easier to obtain in the old days before the ubiquitous motor-car swept the doctor's top hat into oblivion. To the young and inexperienced man the formal coat was often a definite help in acquiring the elusive "bed-side manner," and in giving the best possible first impression to his patients and their friends. It is not actors alone who feel the advantage of being "dressed to the part." But the order has changed, and perhaps in a few years the top hat will be a thing of the past even in the heart of Harley Street itself.

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## THE CREATION OF WOMAN.

### An Ancient Pension Legend.

In the beginning when Twashtri came to the creation of woman, he found that he had exhausted his material in the creation of man, and that no solid elements were left. In this dilemma, after profound meditation, he did as follows:

He took the rotundity of the moon, the curves of creepers, and the clinging of tendrils, and the trembling of grass, and the slenderness of the reed, and the bloom of flowers, and the lightness of leaves, and the tapering of the elephant's trunk, and the glances of deer, and the joyous gaiety of sunbeams, and the sweeping of clouds, and the fickleness of winds, and the timidity of the hare, and the vanity of the peacock, and the softness of the parrot's bosom, and the hardness of adamant, and the cruelty of the tiger, and the hot glow of fire, and the coldness of snow, and the chattering of jays and the cooing of the dove, and the hypocrisy of the crane, and the fidelity of the drake. Compounding all these together he made woman and gave her to man.

But after a week man came to him and said:

"Lord, this creature you have given me makes my life miserable. She chatters incessantly and teases me beyond endurance, never leaving me alone. She requires attention every moment, takes up all my time, weeps about nothing, and is always idle. So I have come to give her back again as I cannot live with her." Then Twashtri said "Very well," and took her back.

After another week man came to him saying:

"Lord, I find my life is lonely since I surrendered that creature. I remember how she used to dance and sing to me, and look at me out of the corner of her eye, and play with me and cling to me. Her laughter was music; she was beautiful to look at and soft to touch. Pray give her back to me again." And Twashtri said "Very well," and returned woman to man.

But after only three days had passed, man appeared once more before the creator, to whom he said:

"Lord, I know not how it is, but after all, I have come to the conclusion that she is more trouble than pleasure to me. Therefore I beg that you take her back again."

Twashtri, however, replied: "Out upon you. Be off. Will have no more of this. You must manage how you can."

Then quoth man. "But I cannot live with her!"

To which Twashtri replied: "Neither could you live without her." And he turned his back on man, and went on with his work.

Then said man: "Alas, what is to be done? For I cannot live either with or without her!"

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## REFUSING MEDICAL SERVICE.

The *Lancet* takes occasion to reply editorially to a correspond who asks for express an opinion as to whether a medical practitioner is legally bound to give his professional services when called upon to do so, or whether he may refuse assistance, although a fee is tendered. The answer to the question as he states it is easily given: there is no such legal obligation as that suggested. There are, however, other obligations than those imposed by the law to be considered by the medical man who feels disinclined to attend a particular patient—obligations which will have weight in different degrees according to circumstances. We refer to the social or moral obligation, and to that imposed by humanity and professional honour alike not to allow human life to be sacrificed or grievous human suffering to be prolonged on account of any personal antipathy, or of any personal inconvenience, or of any suspicion or even certainty that the attendance given will not be remunerated. The question of remuneration occurs in

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the letter of our correspondent; it does not, however, appear to affect the legal obligation as to which he inquires, and the same may be said with regard to the moral obligation in cases of the nature that we have suggested. A medical man may have a strong reason for not wishing to attend a particular person who is able to remunerate him; he may be summoned to do so and may be reasonably certain that there is no urgent need for his services, and also may know that there is another medical practitioner at hand who will be glad to do all that is required. We conceive this to be an instance of the absence of legal or other obligation. On another occasion the same man may have good reason to believe that he is being summoned to a case where the patient's life would be endangered even by a few minutes' delay spent in the endeavour to obtain aid from someone other than himself. Here, of course, the medical man should go at once, and he always does go.

The moral obligation will depend upon a variety of circumstances, but will not be affected in such a case by the certainty or uncertainty of remuneration. But consideration must be given to the probability that in the event of death occurring after a refusal of medical aid, although it may be clear to those who can appreciate the circumstances that death was not in consequence of such refusal, a coroner's jury will record an adverse opinion upon conduct of which a possibly prejudiced and inaccurate account will be made public. This is a separate element of the case to be taken into account in arriving at a decision; it does not affect the moral obligation. But the position of the medical man in relation to some who desire to be his patients is not that of a person who, because he has devoted time and money to acquiring scientific knowledge and skill, is expected to be the servant, paid or unpaid, of anyone who may desire to employ him. This view our correspondent may rightly resent, refusing not only for his own sake, but from a sense of what is due to his profession to be so regarded. On the other hand, the medical practitioner who analyses the incidents of his professional life will remember many occasions on which he has found himself called upon to exercise his scientific knowledge and skill by a sentiment of humanity and a feeling of duty beyond his own control, but influencing equally his fellow men in other walks of life, or in the ranks of unemployment, according to their qualification to assist in attaining the same object. In illustration let us suppose a child to have fallen into water and to have been rescued by a passer-by at some risk of his own life, and to the certain injury of his clothes. The child is laid insensible on bank or towing path at the feet of a medical man also present by change. The latter, of course, without hesitation devotes himself immediately to the resuscitation of the rescued child. No question of remuneration, of parental gratitude, or of any other consideration arises in his mind any more than it did in that of the layman who had the opportunity to save life and took it, being himself perhaps aided by proficiency as a swimmer. Either the primary saviour or the second saviour of the child may later find their services rewarded, but neither would act with this idea before him. If, however, we suppose the medical man to be at home at the time of the accident, and to be summoned by messenger, when more or less busy with other matters, we shall see that our criticism of him should he refuse to attend will depend not upon the urgency of the child's need of treatment, but upon the extent of the medical man's knowledge of that need, upon the clearness of the information conveyed to him, upon his power to leave the matter in hand (possibly a patient also requiring his attention), upon his knowledge that no other assistance than

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his own is obtainable, in short, upon "circumstances".

If we consider all the possible aspects of any simple instance where a medical practitioner may decide to refuse his services, we shall see at once that cases must of necessity vary infinitely, and that each must be judged by the medical man, as we have suggested above, on its own merits. The law imposes upon him no obligation except to use reasonable care and skill in those matters which he undertakes. Where the law does not intervene his conscience will be his guide, and he must act in accordance with its dictates, having regard to his own honour and that of the profession of which he is a member.

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## THE LATE DR. PIFFARD.

Dr. George Henry Fox of New York, in the *Journal of Cutaneous Diseases* for February, gives some reminiscences of the well-known dermatologist, the late Dr. Henry Grainger Piffard, in which he tells two amusing stories about him. Dr. Piffard began to collect foreign works on skin diseases. He was a fair German and a better French scholar, but knew very little of Italian. To supply this deficiency he at once subscribed for one or two Italian medical journals, selected a teacher, and attacked the language wtih his customary vigour. Happening to run across an advertisement of some book, entitled something like *"Trattato della Pelle et cetera,"* he gave his bookdealer an order for it. The bookdealer, in a polite note, informed him that this was an expensive work, published by the Italian Government, and that it would take several weeks to import it. Piffard replied in language more vigorous than polite—"Expense be damned"; when he wanted a book he expected his dealer not to talk about it but to get it. In about two months, during which time his knowledge of Italian had rapidly increased, the book arrived and with it a bill for about £12. To his surprise and dismay he discovered at first glance that it was not a strictly dermatological work, but an elegantly bound and elaborate treatise on the tanning of hides.

The other story illustrates well the fact that *non omnia possumus omnes.* Dr. Piffard was a most versatile man, and in his ample affections for hobbies embraced many mistresses, including microscopy, medical politics, botany, canoeing, photography, bicycling, fishing, rifle shooting, mycology, radiotherapy, Esperanto, &c., with all of which he acquired some appreciable proficiency. The only thing he ever attacked to meet with signal defeat was music. When a young man Dr. Piffard was seized by the then prevailing craze to play the banjo. Dobson or some other professor was advertising proficiency in six easy lessons. Piffard, entirely unaware of the important fact that he had little or no music in his soul, decided to court the "heavenly maid" in her guise of sheepskin and catgut. He called on the professor, bought an expensive instrument, took his first lesson, and started home with high hopes and a small music-book. The latter he read carefully, and doubtless committed to memory. The position of his fingers on the frets, as shown him by the professor, he practiced through many spare hours for a week, and then went proudly to his second lesson, eager to show how much he had accomplished. The professor listened to his pupil's performance with an expression of sober surprise. Then seizing the banjo he strummed it for a few minutes and inquired: "Doctor, do you know what tune I am playing?" "No, I don't," said Piffard with perfect truthfulness. "Well, Doctor, there is no use in going any further. I just played 'Carry me back to Ole Virginny,' the tune you have been practicing for a week—and will never learn. Now, I'll buy your banjo back for half price and charge you nothing for the lessons, provided you will never tell anybody that you were a pupil of mine."

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# THE SICK ROOM.

### AMUSING THE SICK CHILD.

Every one knows, says the *Healthy Home,* how important nursing is when either children or grown people are really sick. A good nurse, whether she be mother or somebody who comes from outside, is often of as much real value as even the doctor; but there comes a time in most cases of sickness when recovery begins.

Most children who are "really sick" are docile and easy to care for, but children who are only a little sick or who are recovering, are fretful, irritable and exceedingly hard to get along with. For these there must be tact, kindness and if necessary firmness. As recovery progresses, it is best for the mother or nurse to devise occupations or amusements which will tend to keep the child good natured and to keep its mind from its remaining ailments and "banish Boredom Bacillus from the child's land of getting well."

One thing which appeals to nearly all children irrespective of "race, creed, or color." is story-telling. From the little tots, who listen eagerly to the adventures of Prince Fairyfoot in the enchanted forest to the older ones who appreciate word pictures from Scott or Dickens or Stevenson, there is not one who will not yield to the magic.

#### The Lure of Stories.

Told stories seem to children more real and more intimate than those read from a book, and their uses are endless. Many glasses of milk have gone down unwilling little throats because, when the last drop was swallowed, the wonderful "Tar Baby" would be told; many a child has taken willingly a rest hour in the middle of the afternoon, knowing that in the quiet of the darkened room someone would sit by the bed and recite verses from Stevenson's "Child's Garden," or Eugene Fields' "Love Songs of Childhood." The antics of Br'er Fox and Br'er Rabbit have often distracted attention from tangles in curly hair, and at night the sandman steals in unawares, under cover of Old Father Pumpkinhead, or Aladdin and his Wonderful Lamp.

A promissory note made out in due form for two stories, payable on demand, is very comforting to think of while a disagreeable treatment is in progress.

To tell stories well is an art. One must not only have a wide knowledge of children's folk-lore, but a sympathy for them as well. "I don't like Miss A.'s stories," wailed a small patient. "She doesn't tell them to me, she just sits and tells them." Children are so very quick to see the difference between genuine and simulated interest.

### APPLYING HEAT TO A SICK PERSON.

It often happens that a sick person may become cold and chilly. It happens especially after an operation, that owing to the shock the temperature becomes subnormal or below the proper temperature. Something more than blankets is needed in cases of this kind. A good way has been to surround the patient with hot water bottles. It is necessary, however, that the water in the bags should be only warm, as there is danger of burning the patient.

A far better way, where the electric current is available, as in a place where there are electric lights, is to use a thermaphore, a thick pad or blanket with an electric current running through it, thus warming the pad and making it comfortable for the patient. These are so made as to be capable of being heated to various temperatures, so that the desired amount of heat required may be secured.

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### MEDICINAL VALUE OF APPLES.

The *Dietetic and Hygienic Gazette* reminds us that the apple contains a larger percentage of phosphorus than any other fruit or vegetable. This phosphorus is admirably adapted for renewing the essential nervous matter of the brain and spinal cord. Also, the acids of the apple are of signal use for people of sedentary habits, whose livers are sluggish in action, those acids serving to eliminate from the body noxious matters which, if retained, would make the brain heavy and dull, or bring about jaundice or skin eruptions and other troubles.

It is also the fact that such fresh fruits as the apple, pear and the plum, when taken ripe, and without sugar, diminish acidity in the stomach rather than provoke it. Their vegetable salts and juices are converted into alkaline carbonates, which tend to counteract acidity.

A good, ripe, raw apple is one of the easiest of vegetable substances for the stomach to deal with, the whole process of its digestion being completed in eighty-five minutes.

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### SALINE ENEMA BY DROP METHOD.

J. Edgerton Cannaday, in the *Journal of the A. M. A.*, states he has found that the most simple means of inducing the fluid to flow drop by drop is not a hemostat but a hairpin and a match. When the hemostat is clamped on the tube it invariably begins to cut into the rubber and probably five minutes after the solution has been flowing drop by drop it is running in a steady stream. A much better, simpler method, and one which will issue a steady drop by drop flow as long as is desired, is provided for as follows: An ordinary wire hairpin is passed about the rubber tubing so that one of its prongs extends on either side; the free ends are secured from spreading apart by a twist of the wire with the fingers. Three or four wooden toothpicks or a match trimmed down to a wedge-shaped point are induced between the wire hairpin and the rubber tube and gently pushed in until the flow is just as desired. As a rule it is not wise to attempt to give too much fluid at a time. The author finds that in the average case about 6 or 10 ounces every hour and a half or two hours will be sufficient and will be a little less than the patient will tolerate comfortably. In giving saline solution regularly over a space of more than twenty-four hours one will find that more is usually absorbed at first than later after the system has been saturated with fluid.

A soft rubber catheter in the rectum is better borne and causes much less irritation, as a rule, than a rigid nozzle. If this catheter is made after the type of the usual retention catheter is made after the type of the usual retention catheter or if it is secured in place by a strip of adhesive plaster passed across the buttocks the patient is saved from the annoyance of frequent introduction and removal.

Aside from the well-known value of saline solution by rectum in the treatment of shock, thirst and hemorrhage, it is perhaps of greater value still in the prevention of urinary irritation and suppression. Usually the operative patient is depleted of water by purgation and gets but little fluid for several hours prior to, during, and after operation. A considerable amount of toxic and highly irritant material is thrown undiluted on the kidneys and they may prove unequal to the strain. If these toxic bodies are highly diluted with water their elimination will be felt far less.

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### THE BED ROOM FLOOR.

The *Charlotte Medical Journal* advises that the floor covering of the sleeping room should be on the style of a rug, so

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that it can be taken up frequently and thoroughly cleaned in the open air. The floor should be of such a finish that it can be scrubbed several times a month with some good antiseptic solution and should be wiped up daily with a damp cloth. A damp cloth is used because dirt will cling to it; whereas, with a dry cloth dirt would be merely brushed from one spot to another and into the air of the room. The hangings of the room should be as few as possible, as they are merely ornamental germ gatherers. Such as are used should be of washable materials.

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### KEEPING THE HANDS SOFT.

The *British Journal of Nursing* emphasizes the importance to nurses to keep their hands soft and supple, as nothing is more objectionable to a sick person than to be touched with hands that are hard and rough. At the same time, nurses have so constantly to put their hands in preparations which have the effect of roughening them that many will be glad to know of a preparation which is easily prepared for keeping them in good condition. An experienced private nurse sends us the following recipe:

An excellent preparation for keeping the hands soft and white is made by mixing 2 oz. glycerine, 2 oz. toilet vinegar, ½ oz. rectified spirits of wine. Rosewater or Eau-de-cologne may be used instead of the toilet vinegar if preferred.

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### PERSONAL SIDE OF THE MILK PROBLEM.

The *New England Medical Monthly* pertinently gives the milk question a direct personal turn. It pointedly asks:

Do you believe in pure, clean, fresh milk? Do you? How much do you believe in it? Do you have the very best milk for your own table? It costs quite a bit more. Do you believe it is worth it? When asked by a patient or a friend, do you tell them that the best is none too good? Have you found out what dealers have the best milk? Or do you rely on the fact that the servant has not yet complained about a dirty sediment in the bottles or a scanty cream?

The State Board of Health is making investigations in regard to the cleanliness of farmers all of the state and publishes its findings. Do you know what their opinion is in regard to your milkman or in regard to A., B. or C. who furnish milk to your patients? Outside of the large cities milk is commonly delivered by the producer directly to the consumer. Have you any idea what sort of barns have protected the cows of your milkman this past winter? Or do you know what he considers a good food for cows? Probably you will have to look it up yourself before you can give any advice. What is the water supply? Not that we could suggest that the water is used to dilute the milk—not for a minute would we suggest that. But it is used for washing battles, pails, pans, etc. We medical men are believers in germs, you know, and water which is not boiled far too often is contaminated. Here they are, just ready to take up their abode in warm milk. It will not take long for them to multiply tremendously.

Are there cases of typhoid fever, scarlet fever or diphtheria in your town? Probably. Are you sure that these do not have contact with the milk supply?

In cities we cannot do much with the producer. But we can know something about the freshness of the milk. The older the milk the more germs—every time! Unless indeed it is pasteurized, and then the break in the geometric progression is only for a short time. We can, too, know the precautions taken by the middleman, in handling his supplies. Rigidly enforced icing in hot weather is the only safeguard. Sealed bottles are becoming more common and should be required.

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In the individual home the same care is needed.

And will it all pay? Directly in your own home, yes, of course. But outside, among your patients? You will not have so many sick babies; little children will be better nourished and less often need "spring tonics"; adults will be less often ill and be stronger physically. Will that pay the doctor? Not immediately surely, but eventually just as certainly. Be a leader in your community along these lines of preventive medicine.

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### A NEW MEASURE WANTED.

That the teaspoon and tablespoon are measures of varying capacity needs no argument, and the *American Druggist* very properly calls attention to the fact in a recent issue. It seems strange how carefully a physician will calculate a dose and a dispenser accurately measure the same, or the government turn down a formula for adjustment with the suggestion that the two teaspoonfuls be decreased to one, and when these bottles reach the "long suffering public," he clumsily extracts the cork and takes "a swallow," winking knowingly at the trembling druggist and assuring him, when he has gotten his breath, that he "knows the dose alright, alright." It is hard to be always on the instructor's stool, but no opportunity should be lost of instilling into the public mind that medicine to have the effect desired by the prescriber and compounder should be taken in the exact dose specified, and pharmacists might help out by supplying correct medicine glasses with the medicines dispensed on all occasions just as they supply corks for the bottles.

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### IN THE HOSPITAL AT NIGHT.

A correspondent to *The Trained Nurse,* writing from the patient's standpoint, has something to say about night service in a hospital.

"Personally I have this critisism to make: In two general hospitals where I was a patient I was always obliged to ring repeatedly for the nurse on duty at night; and I know that on many occasions these girls were holding very jolly little receptions with some of the house doctors, who came down to the ward offices especially to see the nurses. Many times I heard their voices and laughter for two or three hours and until long after midnight. One of these hopsitals had a night superintendent of nurses, and the other did not.

"Of course, it is against the rules of hospitals for house doctors to visit wards except upon professional duties. But where will a hospital be found where this rule is not repeatedly broken? And I know from personal experience that the neglect to answer patients' calls promptly often results in real suffering for the patients.

"So far as outward appearances go, one may decide that many of the house doctors in hospitals need much more careful oversight and discipline than they now receive. I believe that the superintendent of the hospital is supposed to have the oversight of all the house officers; and for the sake of the patients I wish there was some way in which he could be kept informed in regard to the numberless infringements of rules by the internes.

"It is certainly for the best interests of hospitals to have a thoroughly efficient night superintendent of nurses, who does not hesitate to discipline severely if necessary, and who visits each ward much more frequently and unexpectedly than is usually customary."

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# MEDICAL PHARMACY.

### STROPHANTHIN SOLUTION.

Strophanthin is a glucoside obtained from Strophanthus Kombé Oliv. It occurs as a yellowish, amorphous powder soluble in water and in alcohol. Strophanthin is a vasoconstrictor and cardiac stimulant, eminently adapted for use in acute and chronic cardiac insufficiency, myocarditis, valvular irregularities, chronic nephritis, arteriosclerosis, tachycardia, and acute cardiac debility. It is given per os in doses of 0.0001 to 0.0003 Gm. three times daily, but it is best administered intravenously in doses of from 0.0005 to 0.001 Gm. (Single and per day.) The results become evident within a few minutes, the pulse growing stronger and the beat more rhythmical, slower, and fuller. Frequently, after several hours a pronounced diuresis sets in, such as follows treatment for several days with digitalis.

As a cardiac stimulant, strophanthin is superior to caffeine and camphor, which have heretofore been the last resort in cardiac failure. Furthermore, the strophanthin effect is quite lasting, and may persist for 24 hours, or longer. The advantages to be gained from the use of strophanthin intravenously are the rapidity of its action, the certainty of the effect, and the absence of all intestinal disturbance.

In order to make the intravenous injection so as to exclude every possibility of danger (from air embolism, etc.) the following procedure is best: The patient is put on his back, and the arm is placed on a slightly elevated solid support. Stasis of the vein in the inner bend of the elbow is effected by a compress applied to the upper arm. The syringe is filled perfectly free from air bubbles, and the needle introduced into the vein; a little blood is now withdrawn into the syringe, then the compress is relaxed (best by an assistant) without moving the arm, and the injection then slowly effected. The object in withdrawing a little of the blood is to make certain that the needle is within the vein, as only then may the injection be performed. A 1:1000 solution is best used and it should, of course, be sterile.

The 1:1000 strophanthin solution (B. S.) is specially prepared for this form of administration, and is to be preferred. Ordinarily 1 Cc. of the 1:1000 solution (=0.001 Gm. strophanthin) may be injected, but the dose should *not* be repeated within 24 hours, nor should it be given in full doses where digitalis has been given just previously; in this case there must be a suitable reduction in the dose of strophanthin. Care must be taken also not to give the full dose to the aged, or in severe arteriosclerosis; in such cases not more than 0.25 to 0.5 Cc. (=0.00025 to 0.0005 Gm. strophanthin) should be given; the dose may be repeated in an hour or two if necessary.

The antidotes to strophanthin are straphisagrine, atropine (0.0005-0.001 Gm. subcutaneously), camphor, picrotoxin, and mustard plasters.

### MASTIC DRESSINGS FOR WOUNDS.

In a note published in the *Journal de pharmacie et de chimie* comment is made by W. V. Oettingen on the advantages of a solution of gum mastic and linseed oil as a dressing for wounds, based on his own observations during the Russo-Japanese War. Considering it dangerous to do so, he never washed out the wounds prior to the application of the varnish, which had the following composition:

R Gum mastic.....3v;
Chloroform.....3x;
Linseed oil.....gtt.xx.
Ft. Solutio.

This varnish was brushed on the

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wounded surface and a dressing of absorbent cotton and muslin applied. A fourfold piece of muslin about six inches square is taken and between the folds is placed a layer of absorbent cotton. It is sufficient to apply this dressing on the coating of mastic painted on the wound, and it adheres easily. These dressings are prepared beforehand, and about forty or fifty are sterilized together, taking care to surround them with parchment paper, and closing the packages very carefully when they are removed from the sterilizer.

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## THE ADVANTAGES OF SULPHUR AS AN INTESTINAL ANTISEPTIC.

Summarizing the advantages of sulphur as an intestinal antiseptic Wild (*Proceedings of the Royal Society of Medicine*, December, 1910) says:

1. It is almost tasteless and easily administered.
2. It is insoluble in the stomach, and the greater part of it passes along the whole length of the alimentary canal.
3. It does not interfere with the action of any of the digestive secretions.
4. It forms active antiseptic substances in the intestines when their contents become neutral or alkaline. Some of these substances are gaseous and penetrate to all parts of the intestine.
5. It is sufficiently nonpoisonous to be given in effective doses.
6. It has valuable laxative properties which promote an early evacuation of the intestinal contents.
7. It is cheap.

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## FRESH MEDICINES.

Francis Hemm, of St. Louis, in an address before the Missouri Pharmaceutical Association, called attention to the importance of medicine being freshly prepared.

### Fresh vs. Old Emulsions.

Freshly made emulsions from fresh and prime oils are just as much superior to ready in stock old emulsions (no matter what their original quality) as a fresh egg beats a rotten one; or as fresh, sweet milk is ahead of sour clabber; or as fresh, sweet butter is to the rancid irritant kind.

### Fresh Syrups vs. Old Ones.

Recently prepared syrups are better, as a general rule, than old ones. Especially is this true of all those which undergo fermentation readily or of such which easily decompose chemically.

A fresh syrup of hydriodic acid as now directed by the U. S. P. is always right, but an old one is not.

A freshly made syrup of ferrous iodide, U. S. P., is a perfect product, whereas an old one is not such by its very chemical nature.

Syrup of the phosphates of iron, quinine and strychnine, U. S. P., is a fine preparation when freshly made, but it does not take very long before it discolors and precipitates.

Syrup of acacia, when just prepared on the physician's order, is a very acceptable demulcent—when it gets old it becomes a nauseant and irritant.

Many slimy and fungoid deposits form in a large line of ready-made old syrups as they undergo natural forms of decomposition.

### Miscellaneous.

Ready-made infusions and decoctions are generally conceded to be ill adapted for stock goods and have always stood condemned.

Chalk mixture, Griffith's iron mixture, Brown mixture and Compound rhubarb mixture are something entirely different when freshly made than when old.

Mucilages, generally, are only right when freshly prepared.

Ointments, cerates and oleates are particularly sensitive and become rancid and irritating, and if no doubt shall exist as to their fitness for application, they had better be made up fresh.

Solutions of ammonium acetate, potassium citrate, magnesium citrate, chlorine water, lead sub-acetate, caustic potassa, caustic soda, and many more are

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not at all the preparations which the Pharmacopoeia intends them to be when they are old.

Suppositories when freshly made from sweet and bland cacao butter are better than old rancid ones.

Freshly made pills of phosphorus, ferrous iodide, ferrous carbonate, mercurial mass or any others dissolve readily and contain unaltered just what the Pharmacopoeia says they do.

Prescriptions for freshly made pills or mass capsules made with proper excipients are always reliable and soluble. This is not true of old stock.

And thus we might proceed, ad infinitum and prove that extemporaneous pharmacy and magistral prescriptions have not yet lost their right and necessity to exist; but, on the contrary, in justice to the patient, and in the faithful discharge of our mutual duties, physicians and pharmacists ought to arouse themselves out of their slumbers and in a determined and manly manner do their full duty in this cause.

## SUCCINIMIDE OF MERCURY.

A correspondent of the *Physicians' Drug News* enquires how a solution containing 1/5 grain of succinimide of mercury to the dose, can be prepared so that it will not cause a distressing local reaction when administered hypodermically?

According to Julien a hypodermic solution of mercury succinimide which, when injected neither causes pain nor irritation, may be prepared by dissolving 1/24 grain of this salt in sufficient distilled water to make 25 minims. He states that from 7½ to 15 minims of the solution should be injected daily.

It is important in preparing hypodermic solutions that all utensils used should be sterilized by thoroughly washing and drying in an oven at a temperature of 220 degrees Fhr., also that the distilled water be recently sterilized by boiling. If these precautions are taken, and the bottles to contain the finished solution are sterilized, the solutions keep for a long time, if excluded from the air. No doubt most of the sores reported to have resulted from hypodermic injections, have been occasioned by some micro-organisms in the solution.

## THINGS A DOCTOR OUGHT TO MAKE.

Under this heading the *Physicians' Drug News* publishes the following working formulae:

**Compound Liquid Petrolatum.**

| | |
|---|---|
| Camphor | gr. xxiv |
| Menthol | gr. viss |
| Thymol | gr. iiiss |
| Eucalyptol | gr. viss |
| Oil wintergreen | gr. xxiv |
| Hydrastin | gr. 1-10 |

Liquid petrolatum sufficient to make 16 fluid ounces.

M. Uses: A cooling application for chronic rhinitis and other nasal troubles. To be applied by means of an atomizer.

**Liquid Court Plaster.**

| | |
|---|---|
| Creosote (beechwood) | ʒj |
| Collodion, flexible | ʒiv |

Mix the creosote with the collodion.

Uses: An air-tight protective dressing.

**Compound Acetanilid Powder.**

| | |
|---|---|
| Acetanilid | ʒvii |
| Sodium bicarbonate | ʒij |
| Caffein | ʒj |

Mix.

**Compound Alum Powder.**

| | |
|---|---|
| Camphor | gr. lx |
| Carbolic acid | gr. cxx |
| Dried alum, powd | ʒvi |

Mix the camphor and carbolic acid in a mortar. When liquified add the alum and mix thoroughly. Used as a stimulating and healing application for indolent ulcers and also used to repress fungous granulations.

## PHARMACY OF 606.

"606" is dissolved by rubbing it up in a mortar with 1 to 2 Cc. of the commercial solution of caustic soda. Glacial acetic acid is added drop by drop until a fine, yellow, slimy sediment appears. The latter is mixed with from 1 to 2 Cc. of sterilized distilled water. To this solution is added either 1/10 per cent of the standard solution of caustic soda or one per cent of acetic acid until litmus-paper shows the solution to be exactly neutral. Absolute painlessness of the injection is

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dependent upon exact neutralization. The writers inject the remedy subcutaneously under the shoulder-blade, after careful disinfection, including the application of tincture of iodine. The very latest modification adopted in the method of injection consists of the centrifugation of the emulsion, and the dilution of the sediment obtained in this way with a physiological saline solution. In this way they have succeeded in making the injection itself absolutely painless. Later on the patient experiences slight drawing pains, which soon disappear. On the second or third day there is some swelling and reaction at the point of injection. Usually these are but slight, and only occasionally does a hard infiltration form, which, however, never tends to suppurative, since it seems to represent not an infectious but only an aseptic chemical reaction.

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## BALSAM OF PERU.

Bickle, in the *Australasian Medical Gazette,* states that although the uses of the balsam are not very numerous internally it is used as a remedy for bronchitis with much purulent expectoration. The taste is disagreeable, but that can now be avoided by prescribing the drug in the form of capsules of 10 minims each.

Its greatest use has always been as an external application. It is used to destroy the acarus scabei, the cause of the skin trouble known as the itch. It can be applied pure on diluted with an equal quantity of castor oil. It is much more useful if employed after a hot bath. In cracked nipples it is almost a specific. He finds it most successful when combined with the old unguentum cetacei. One drachm of the balsam to seven of the ointment makes an excellent application. It is also useful in the same form for cracked lips, or as a stimulating application to indolent ulcers. As an addition to violatile inhalants in chest cases it is undoubtedly of value.

Apart from these medicinal qualities, it has another and a very useful one for medical men for their personal comfort. Combined with vaseline or some other petrol basis if used as a lubricant it prevents the objectionable persistence of disagreeable odors such as those of ulcerating carciuoma, of the axillary glands, of midwifery and of post-mortem work, etc. This is no slight advantage, as a single wash with ordinary soap after its use will leave one's hands quite free. Salol and spiritus vini rectificatus will also do this, but the effect on the hands is most injurious. It is distinctly antiseptic and contains both cinnamic and benzoic acids. The bactericidal effect is equal to about a two-per-cent carbolic acid solution, and it has a very inhibitory effect both on streptococci and staphylococci. He has used this drug for several years with the greatest comfort, and gets it put up in collapsible tubes. In midwifery cases if the perineum is harsh and tense the free lubrication with this ointment will soften the tissues wonderfully and prevent what seems otherwise to be an inevitable rupture.

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## GRAMS PER 100 CC.—GRAINS PER FLUID DRAM.

The decimal, or conversion factor, as it is called, is obtained as follows:

One gram is equivalent to 15.432 grains. One cubic centimeter equals 0.269 fluid drachm, whence 100 cubic centimeters equals 26.9 fluid drachms. One gram of substance, in 100 cubic centimeters, is therefore equivalent to 15.432 grains in 26.9 fluid drachms. Suppose, now, that we have in every 100 cubic centimeters of the preparation a number of grams of the substance, which we may represent by the letter $g$. Since one gram=15.432 grains, $g$ grams=$15.432 \times g$ grains, the quantity present in 100 cubic centimeters, or 26.9 fluid drachms of the preparation. The quantity present in 1 fluid drachm is evidently $(15.432 \div 26.9) \times g$, or $0.57 \times g$. Therefore, in order to express grams per 100 cubic centimeters in grains per fluid drachm, multiply the number of grams by the decimal 0.57.

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# ELECTRO-THERAPY.

EDITED BY NOBLE M. EBERHART, A. M., M. D.
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## ELECTROLYSIS IN EYE WORK.

Cornwall, in *Ophthalmology*, states that in the last fifteen years, he has treated all his cases of corneal ulcer, excepting phyctenular, by this method and has been gratified in almost every one. This has often taken place subsequent to the skillful administration of the standard forms of treatment. He has also treated a few cases of corneal fistula by the electrolytic needle and was successful when the opening was near the corneal periphery. This was done by bending the needle about two millimeters from the point at right angle to its shaft and with it erode the anterior surface of the iris and the posterior surface of the cornea to induce adhesion, and also to irritate the walls of the fistula. In this way the iris was made to plug the post entrance of the fistula till scar tissue would fill the canal. He treated a case many years ago, that would answer to the above, description and report of which have been noted in periodicals and text-books. Ten years after the operation, the cicatrix gave way, forming an ectasia. Several electrolysis operations failed to re-establish the cure until an iridectomy was performed, since which time the bulging of the scar has ceased.

Reverting to indolent ulcers of the cornea, the author gives instruction as to the technique of electrolysis. The needle to be used may be selected at the electrical store from those employed by the "face doctor" who depilates the faces of women who grow undesirable hirsutes. Inasmuch as this work should be done under the magnification of a convex lens as strong as 16D., a very fine pointed needle is best employed. The dispersion electrode—the positive pole—may be placed on the face of the patient. The operator is to secure the most favorable illustration and with the aid of his glass be able to view every aspect of the wall and base of the ulcers. The assistant now is to move the current controller to a point experience has shown to be about right. The needle ought to register about half a milliampere. And now the operator may touch the different parts thought desirable with the point of the needle.

A moderate development of air cells should form. If this effervescence is too active it would indicate that the current is too strong and if little or none, the current is too weak. Of course the part has been anesthetized by cocaine. It is impracticable in this procedure to rely on the ammeter, as the indicating needle of the instrument will be kept moving back and forth by the intermittent touching, so that no knowledge of current strength can be told. The author suggests to anyone beginning this method that he should practice with it on some part not so important as the eye.

## ELECTRICITY IN SALPINGITIS.

Edward C. Dreher, in the *Hahnemannian Monthly*, says it is his custom to apply freely Churchill's tincture of iodine to the vaginal mucus membrane covering the mass, then begin the use of what is to his mind the most valuable

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aid we have, that is negative galvanic electricity. A large copper ball, wrapped with cotton, gauze covered, wet with saline solution, is placed in vagina, through a speculum directly against and usually under the mass—then connected with the negative side of the source of supply of current. A large dispersive abdominal electrode, well wet with saline solution, is placed in position and connected with the positive side of the apparatus. And about 15 to 20 milliamperes of current gradually turned on, for the first three treatments, during the first week, he rarely gives over 20 M. A. of current, until the second week, but then begin to increase until the patient can comfortably stand 50 to 60 A. M. of current, and keep at that dosage on successive treatment.

About one treatment out of every three he wets the vaginal electrode covering with saturated solution of Potassi Iodine for the Cataphoric effect of the iodine. Again if there seems to be an involvement of the uterine canal he gives intra-uterine copper electrolysis, using a copper electrode that fills up the uterine canal, and connected with the positive pole. The generation of oxychloride of copper acts as a very thorough antiseptic and speedily brings about a change in the inter-uterine condition, and aids tubal inflammation.

After the first treatment the patient experiences great relief from pain, which relief is constant and progressive until pain disappears. The mass in the pelvis becomes more free, more movable, and less sensitive and in cases of ordinary severity, and small mass practically disappears, but should the mass remain the patient is free of pain, and decidedly comfortable and able to undergo the usual household duties, and enjoy life without annoyance from old trouble.

As very many cases of sterility are due to the results left from an attack of the catarrhal form, leaving the mucus membrane of tube swollen and tube more or less occluded by discharge; this treatment is particularly efficacious as it brings about absorption of this condition of inflammatory exudate, thereby favoring pregnancy and making a new woman out of what was frequently a wreck.



## THORACIC FLUOROSCOPY.

Wm. Engelbach, in the *Interstate Medical Journal,* states there are many pathological processes in the mediastinal and subphrenic regions that defy clinical diagnosis. Very frequently the symptoms and signs based upon clinical and physical methods are so indefinite or so insufficient that an accurate recognition of the disease is impossible. It is in these conditions that the fluroscope proves a most valuable aid to the other methods of diagnosis, and in many instances a fluoroscopic examination is absolutely essential towards the correct recognition of the diseased process. In thoracic examination it cannot be expected that observations made in one position will possess a high degree of accuracy. Owing to the relative position of the thoracic organs, it is most important to view the chest from as many angles as possible. It frequently happens that the shadows projected from a certain aspect of the chest appear entirely normal, whereas a slight change of position will manifest the presence of some abnormality which might have escaped detection. It is most important that the examiner acquaint himself with the variations of shadows in the different positions.

In the systematic examination of the thoracic region, the author places the subject in the following positions:—(1) Direct antero-posterior, with the screen placed against the anterior chest wall; (2) antero-posterior, with the screen in contact with the posterior wall; (3) ob-

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lique (antero- and postero-lateral) on right and left sides; and (4) antero-posterior or lateral recumbent. The antero-posterior position finds its greatest usefulness in lesions of the lungs, aortic arch, and diaphragm. Changes in the contour of the diaphragmatic shadows are of great value in differentiating pleural lesions from subphrenic abscess. In the oblique position there is normally a light area situated between the vetebræ and large vessels—the prevertebral space A. Small aneurysms of the aortic arch and a tumor in the superior mediastinum, both of which may be indiscernible in the antero-posterior position, obliterate the upper part of the light area and are thus recognized in the oblique position. In latent aneurysm of the descending aorta, which is covered in front by the cardiac shadow, there is frequently a loss of light in the lower part of this area. Chronic inflammatory conditions and empyema of the mediastinum usually darken the middle and lower portions of the pervertebral space.

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### H. F. CURRENT AND X-RAY IN INFLAMMATIONS.

Wm. Benham Snow, in the *International Journal of Surgery,* states that the high frequency current produces two-fold effects upon germ life: (1) The direct action upon the germs exterior to the mucous membrane, destroying them by the actinic and other antiseptic effects of the current discharges from the vacuum tube as previously described; and (2) the induction of profound hyperemia.

Since the high frequency currents do not produce contraction of the tissues, they may be employed with sufficient energy to produce a great deal of superficial heat from the Oudin or indirect d'Arsonval currents; and when the direct d'Arsonval is employed with considerable amperage, considerable heat is produced by the large amperage passing, with consequent induction of hyperemia, through the interpolar field. With these modalities it is also possible, as has been frequently demonstrated, to force into the tissues by ionization agents which have an antiseptic effect upon germs.

The value of high frequency applications with vacuum tubes has been demonstrated by many observers in the treatment of infectious vesiculitis, vaginitis, tubercular adenitis, prostatitis, and numerous superficial streptococcic and staphylococcic infections, as well as in chronic urethral ulceration and infection.

The Roentgen ray, it fust be admitted, possesses the remarkable action of sterilizing most if not all forms of life, animal and vegetable, and preventing fecundation and germination—an action established by most students and investigators. It seems, therefore, to be assured that, when the X-ray is employed in the treatment of local infection with sufficient energy, it is possible to arrest the process.

The course to be determined as to what will be the best and most effective technic to adopt in the varied conditions is the most important question.

The writer has frequently called attention to the fact the Roentgen ray will be robbed of its terrors when it is generally accepted, as has been already demonstrated in the hands of many scientific observers, that radiant light and heat and high-frequency vacuum tube discharges are capable of arresting the inhibitory action of the Roentgen ray by an opposite stimulating action. With these premises, the indication for its employment in the treatment of infectious inflammation is obvious.

The first indication, if infection is to be destroyed, is the employment of the most profound process of inhibition, which undoubtedly is the Roentgen ray. Prolonged exposure to the Roentgen ray,

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fifteen to twenty-five minutes, according to the volume of the radiation, or several shorter daily exposures in sub-acute processes, to arrest the propagating process of infection and, with the germs in this condition, to be followed after an interval of twelve to twenty-four hours by the energetic institutions of means which still further inhibit their activity and simultaneously induce active hyperemia, and at the same time establish a positive chemotaxis, as radiant light and heat and the high-frequency currents do, constitutes a rational procedure against the extension and further development of infection, while the phagocytes brought into the field in large numbers also destroy the germs.

A varying degree of success and promptness of relief from this procedure will depend upon the opsonic index of the individual. If phagocytic activity and energy are sufficient, the infection will be promptly destroyed, and in the event of a lowered resistance the best possible results will be derived by these methods either singly or conjointly. There are few streptococcic, gonorrheal, or tubercular processes which cannot be speedily arrested by the procedure described. Probably no greater advance can be made than that suggested and demonstrated by the writer and others in the treatment of gonorrheal vesiculitis, prostatitis, and epididymitis, than which no greater obstacle to the preservation of the human species prevails.

These methods of treating inflammation are like all other innovations in the sanctum of medical science open to criticism and to improvement in technic. With them, employed from the point of view stated, such a uniform measure of success is, however, obtained, that the writer earnestly commends them to the fellows of the Congress.

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## GASTRIC RADIOGRAPHY.

Barclay, in *Archives of the Roentgen Ray,* quotes the following examples where a radioscopic examination revealed the cause of the trouble. (1) Stenosis of the pylorus had been found at the operation and a posterior gastrojejunostomy had failed to relieve the condition. The radioscopic examination showed that there was an hour-glass contraction which had not been noted at the time of the operation. (2) A patient had been operated upon for gastric ulcer; vomiting was persistent and yet on radioscopic examination it was found that the food was passing out perfectly, but that there existed adhesions near the cardiac orifice almost bisecting the stomach. A further operation completely relieved the patient. (3) A patient had been operated upon for gastric ulcer and persistently vomited; on X-ray examination it was found that the food was held up in the duodenum, and apparently, a vicious cycle was formed. (4) A patient presented exactly the same clinical picture as the third case, but it was found that there occurred no delay in the duodenum and that everything was working perfectly. On the strength of the X-ray report, the surgeon spoke very strongly to the patient, reduced her to tears, and from that day onward she ceased to vomit and she regained her health. (5) Failure in another case was due to a spasmodic hour-glass contraction for which no cause could be found at a second operation. In conclusion author states that, provided that a good view can be obtained, a definite opinion can be expressed as to the actual state of the stomach, as to whether it fulfills its functions, and a definite idea as to the presence or absence of pyloric obstruction and hour-glass stomach can be formed. Proof of carcinoma of the stomach is obtained in many cases, and the need of operative interference for obstruction is always indicated often before a clinical diagnosis can be arrived at. Gastric ulcer may be diagnosed in some situations by reason of bismuth

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left in the ulcer or in pockets of cicatrices, but its site is more frequently indicated by spasmodic contractions which play a part in all lesions of the stomach, and complicate the diagnosis.

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### SALICYLIC IONIZATION IN RHEUMATISM.

Wullyamoz, of Lousanne, reports a patient who had suffered severely on three previous occasions from acute rheumatism, and had been treated by the routine drug method with salicylates. At each attack the treatment lasted from six weeks to three months. In his latest illness the salicylate treatment produced no amelioration to speak of, and at the end of a month the patient could scarcely move, and showed an icteric tint and signs of dyspnea. A cataphoretic course of treatment was then determined upon. The whole surface of the body was first washed so as to relieve the pores of any grease that might oppose a resistance to the ions and the electrical current, and on the following day the first sitting was given. Large electrodes of 1 meter in length and 20 centimeters in width were employed, and over the whole extent of the one which served as the cathode was spread, not a solution of salicylate of soda, but, for the sake of simplifying the procedure, the powdered form of that substance. This was rubbed over the surface with the hand in such a fashion as, with the humidity of the electrode, to form a paste. The cathode was then applied to the leg, the base of the electrode resting upon the swollen instep, and the upper part covering the hip region, while the anode was placed on the posterior side of the leg. The upper extremity was dealt with in the same manner. A sitting of one-half hour was given for each of the affected limbs in turn. Two days afterward the swelling had left the knee and the right hand, but the left foot was somewhat painful. Another sitting was given, and after a further forty-eight hours the patient was able to walk without assistance and to obtain a good sleep, which had been denied him for fifteen days previously. The cure was absolutely complete ten days after the commencement of cataphoretic treatment, and after five sittings.

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### THERMO-PENETRATION.

Eitner, in *Wiener Klin. Wochenschrift,* states that if proper care is used, this procedure is devoid of danger.

Many of the apparatus now on the market are of improper construction and deficient in quality of current. If the sparking is not perfectly regular, the condenser becomes heated and useless. Eitner prefers the Poulson lamp. This is an arc lamp which burns in hydrogen gas. If the sparking is not perfectly regular, undampened oscillations occur which produce muscular contractions. In treating joints he uses a large indifferent electrode at some distance and a smaller electrode over the joint. The duration treatment is from 15 to 45 minutes.

Twenty-one cases of gonorrheal arthritis were treated, eight of these were acute cases, six were cured by thermo-penetration of the involved joints, and genitals in a very few days, without other treatment. Two interrupted the treatment. All the acute cases were relieved quickly of pain. Very favorable results were shown in the chronic cases. Eleven cases of rheumatic arthritis were treated. Two cases of acute involvement of the wrist and hand were cured in a few days with thermo-penetration alone. Five cases received salicylic acid preparations

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in addition from the physicians referring them. One case of chronic polyarthritis of knee, elbow, hand and several finger joints was so much improved by two months, treatment, that motion was fully restored. In two very old cases the result was not good. Two cases of gout with painful tophi were permanently improved. One case of neuralgia of the ulnar nerve was cured. One case of sciatica and one case of neuralgia of the trigeminus were treated without any result. One case of chronic bronchitis was materially improved. All cases of acute gonorrhea have been treated during the last one-half years, with thermo-penetration only during the first few days with the results of rapid amelioration of the burning and pain. The writer warms the pendulous portion between two electrodes. After the sensitiveness of the mucous membrane has subsided medicamental treatment is added. The introduction of metallic electrodes in the urethra is condemned because it is possible to damage on account of imperfect distribution of current. He uses, however, a syringe of peculiar construction. With this he fills the urethra with a one per cent solution of nitrate of silver, the syringe is held by the patient and serves as an electrode. The other electrode is placed over the skin of the penis. The parts are warmed to about 40° to 42° C. for one-half hour. Prostatic involvement is seldom treated by the writer with thermo penetration. Care should be exercised to use only undamped oscillations because if muscular contractions occur when using this method, pus is readily carried to healthy parts.

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## REACTION OF DEGENERATION.

Albert C. Geyser, in the *Journal of Therapeutics and Dietetics,* asserts that there is in medicine, especially in diagnosis, no other agent which is capable of furnishing so much valuable and unerring information as the faradic and galvanic currents, but unfortunately the use of these currents seems to be shroud in undeserved mystery. The electrotherapist is in possession of certain facts regarding the action of these currents in health and in disease; he is not in possession, however, of the complete scientific rationale of this action, therefore, in order to make his pseudo science appear scientific, he uses the cloak of mystery and indefinite explanations to cover his ignorance. It is hardly to be wondered at that the profession in general has taken so little interest in so valuable an agent.

To test for the reaction of degeneration we make use first of the faradic current. Apply one pole, it does not matter which, over the region of the spine from which the nerve originates which is about to be tested; place the other pole upon the same muscle, on the *opposite* side of the body from the one which appears palsied. Gradually increase the current and slowly move the electrode over the entire length of the *sound* muscle until a distinct contraction is *seen* and *felt,* then transfer this same strength of current to the *diseased* muscle. If the paralyzed muscle contracts the same as the sound muscle, you may be sure you are dealing with a paralysis of *central* origin; if, however, the muscle fails to contract, it is an equally sure indication that the lesion exists somewhere in the peripheral tract.

Next, if we desire to determine the extent of the lesion, we use the galvanic current, any galvanic battery of 15-20

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cells in good working order will answer the purpose.

Apply the poles as before, and, with the meter in circuit, note the reading on the meter, or the strength of current necessary to obtain a contraction of the sound muscle; transfer the muscle electrode to the muscle in question, again close the current and note the effect. If the muscle contracts as the muscle upon the sound side, then we are dealing with a lesion of *central* origin; if it fails to cause contraction then as before we have a *peripheral* lesion. With a current of medium strength, the contraction should always be stronger when the negative pole is placed upon the muscle and the current closed. Should, however, the opposite be found true, viz., that the positive pole upon *closure* of the circuit produces a stronger contraction than the negative, we shall then have a reversal of what has been accepted as "The Normal Formula," or a *partial reaction of degeneration.*

In testing with either current, however, the contractions should be quick and prompt for the normal state and in *central* lesions; while they will be found sluggish or wave-like or entirely absent in *peripheral* lesions. When the contraction is sluggish or wave-like, then this condition constitutes a quantitative reaction of degeneration; if the normal formula has been reversed, a qualitative reaction of degeneration.

The reflex arc is composed entirely of peripheral neurons, and three sets complete this arc; a sensory nerve to convey the stimulus applied, the motor ganglion cell, and a motor fiber to convey the impulse to the point of stimulation. Should any part of this arc be destroyed no reflex action could take place. An absence or even serious diminution of the reflex act should be construed as a lesion in the *peripheral* system. The *central* motor nerve fibers from the cerebrum, besides conducting impulses to the motor ganglion cells in the anterior horns, exercise the office of inhibiting and controlling excessive reflex action. When, therefore, we find upon examination that the reflexes are markedly *increased,* it is at once a sure guide to the centrally located lesion. (Fig. VII. Page 148.)

As all *voluntary* impulses are controlled from the *central* motor system, it follows that an irritative lesion in this tract would cause additional *tone* or diminished *relaxation,* causing *spasticity* of the muscle under examination, while, on the other hand, if we find that the suspected muscle is *lax* and *limp,* it may serve to indicate that the *peripheral* motor neuron is incapable of conducting sufficient impulses to maintain even normal tone.

We have, then, five cardinal points upon which to base our diagnosis in any given case; these points being diametrically opposed to each other in the two conditions under consideration, should make the differential diagnosis of a *central* or *peripheral* motor lesion simplicity itself.

The spinal examination, while it does not tell us the name or the particular pathologic state of any certain organ, does frequently guide us to the organ involved; it is a very common occurrence that the organ mostly involved gives few or only slight symptoms, while the reflex manifestations might be enormous. It would, of course, be worse than useless to treat the reflex symptoms without removing the underlying cause.

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# THERAPEUTIC BRIEFS.

**Irrigating Membranes.—**

Sixteen grains of salicylic acid and 95 grains of boric acid dissolved in a pint of steril water makes Thiersh's Fluid. This is useful for cleansing serious and mucous membranes, such as those of the mouth and eye, and it may be used for any purpose where irrigation is employed for cleansing purposes.

**Toothache or Earache.—**

Take dram vial and fill with pure water; then drop a tablet of atropin, 1-100 gr., into it. When dissolved it is ready for use. Drop two or three drops into the tooth or ear as the case may be, and plug with absorbent cotton. Repeat every 30 minutes till relieved.

**Pterygium.—**

Take it off the patient's eye by touching it thoroughly with a wooden toothpick dipped in specific tincture Lloyd's thuja occidentalis every other day. It will certainly do the work without the use of the knife or scissors.

**Removing Plaster.—**

According to Dr. E. J. G. Beardsley (*Jour. Amer. Med. Assoc.*), adhesive plaster may be easily and quickly removed from the skin by the application of oil of wintergreen. When extensive areas of plaster are to be removed, an ointment of lanolin, containing 10 per cent. of oil of wintergreen, is better.

**Thread-Worms.—**

Raudnitz has seen permanent cures result from the use of the following:

Naphthalenis .....grn. xxiij
Thymolis .....grn. lxxij
Santonini .....grn. vj
M. et div. in doses no. viij.

In addition to this podophyllin is prescribed, and a suppository containing 1½ grns. each of iodoform and naphthalene is administered.

**Chronic Bronchitis.—**

Bulling recommends the soaking of six or eight pieces of blotting paper with the following solution, and placing them in different parts of the room. The inhalation of the vapors given off is said to exercise a favorable influence on the bronchial secretion, diminishing and finally drying it up. The formula reads:

Menthol .....min. xv;
Eucalyptol .....min. xv;
Oil of turpentine.....min. lxxv;
Oil of juniper.....min. lxxv.
M.

**Sciatica.—**

Von Martinitz (Ellingwood's Therapeutist) reports excellent results in sciatica with the following formulas taken alternately in teaspoonful doses, the interval being an hour:

Tinct. gelsemium.....gtts. 15
Tinct. bryonia alba.....gtts. 15
Tinct. rhus tox.....gtts. 15
Tinct. aconit.....gtts. 15
Simple elixir.....ounce ½
Simple syrup.....ounce ½
Aqua .....ounces 5

Sig.: A teaspoonful to be taken every hour, alternately with this second prescription:

R Phosphoric acid, diluted....ounce ½
Simple elixir.....ounce ½
Simple syrup.....ounces 1½
Aqua q.s.....ounces 4

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# BOOK REVIEWS.

ESSAYS ON LABORATORY DIAGNOSIS FOR THE GENERAL PRACTIONER. By Henry R. Harrower, M. D., Professor of Clinical Diagnosis, Bennett Medical College, Chicago (Medical Department of Loyola University); Editor of "The American Journal of Physiologic Therapeutics"; etc. Chicago: New Medicine Publishing Company. Price $2.00.

This little book, which Dr. Harrower has been promising us for a long time, is now in print and ready for distribution. As to its motive, it represents a most timely and commendable attempt to stimulate the use of the clinical laboratory by the general physician as a routine practice. For several years the author has been preaching, in season and out of season, the importance of a more thorough and systematic use of these diagnostic measures as a routine and periodic practice with every patient, not merely when called for by definite suspicions of certain findings; and has inveighed against the prevalent farcical cut-and-dried methods which tell the physician nothing that he did not know before he performed the tests. In this book he has gathered together all of his protests and admonitions in one strong voice crying in the wilderness. But the author does far more than urge and protest. He is a constructive reformer and a practical Moses, and he shows the way out of the wilderness by a clear and definite path. Every chapter is chuck full of valuable, practical suggestion for the simple, effective performance of laboratory tests and, what is still more to the point, of help to the intelligent understanding of the laboratory findings and the therapeutic ends to which they minister. It is a live, meaty, practical, helpful little book, quite different from the stereotyped text-books of clinical diagnosis, which are all too often outside the pale of the general practitioner, and we cordially recommend it to the immediate acquisition and use of our readers. It is well worth its modest price.

A MANUAL OF CYSTOSCOPY. By J. Bentley Squier, M. D., Professor of G-U Surgery, New York Post-Graduate Medical School and Hospital; Surgeon to Work House Hospital and Home for Aged and Infirm, Department of Charities and Corrections, New York; Consulting Surgeon, New York Neurological Hospital; Fellow American Association of G-U Surgeons; Fellow New York Academy of Medicine, and Henry G. Bugbee, M. D., Instructor in G-U Surgery, New York Post-Graduate Medical School and Hospital; formerly Surgeon in Chief, Vassar Brothers Hospital, Poughkeepsie; Fellow New York Academy of Medicine. With twenty-six original plates, eighteen of which are colored. Octavo, Flexible leather, $3.00 net (sent prepaid on receipt of price). Paul B. Hoeber, 69 East 59th Street, New York.

Cystoscopy is rapidly forging to the front as a mode of urinary diagnosis, and even the general practitioner who would be abreast of the times in dealing with this class of diseases can hardly afford to neglect this latest means of investigation. But it has hitherto been a rather difficult subject to master at long range—especially the technical and interpretive aspects of it—because it is one of those measures, like bacteriology and microscopy, which require ocular demonstration to properly apprehend its findings and significance. This little manual goes a long way toward obviating this difficulty by virtue of its beautifully representative illustrations, in natural colors, and the concise, lucid text explaining the pictures. It is, in fact, more than a manual—it is an atlas of cystoscopy. Considering the excellent

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character of the plates—which are the essential element of the book—its price is very reasonable. Cystoscopy is not really a very difficult procedure. Any practitioner can carry it out in his office. And its advantages are such as to make it worth every man's while to acquire and and make use of it. This little atlas-manual will enable him to do so.

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THE BLUES (SPLANCHIC NEURASTHENIA) CAUSES AND CURE. By Albert Abrams, A. M., M. D. (Heidelberg), F. R. M. S., Consulting Physician, Denver National Hospital for Consumptives, Mount Zion and French Hospitals, San Francisco; Formerly Director of the Medical Clinic, Cooper Medical College, San Francisco. Illustrated. Fourth Edition, Revised and Enlarged. New York: E. B. Treat and Company. Price $1.50.

Dr. Abrams and his characteristically original treatment of medical subjects are by this time a pretty well-known and well-recognized factor in medical literature; and the issuance of a fourth edition testifies to the wide reception that this particular book has had throughout the country. To those who, by chance, have not seen the work we would say that it represents a keen and sensible explanation, upon a physical basis, of all those depressive conditions of body and mind which the layman lumps under the expressive term "the blues", and a rational suggestion for their cure. The present edition does not materially differ from previous editions, except in the addition of the author's latest experiments and conclusions as to the therapeutic value of spinal concussion in eliciting certain vertebral reflaxes, which he believes will find a practical application in cases of splanchnic neurasthenia. There is lots of good thoughtful stuff in the book, as there is in all that Dr. Abrams writes, and a mastery of its contents will add considerably to the practitioner's resourcefulness and efficiency.

PRACTICAL DIETETICS WITH REFERENCE TO DIET IN DISEASE. By Alida Frances Pattee, Graduate, Department of Household of Arts, State Normal School, Framingham, Mass. Late Instructor in Dietetics, Bellevue Training Schools for Nurses, Bellevue Hospital, New York City. Former Instructor at Mount Sinai, Hahnemann, and the Flower Hospital Training Schools for Nurses, New York City; Lakeside, St. Mary's, Trinity and Wisconsin Training Schools for Nurses, Milwaukee, Wis.; St. Joseph's Hospital, Chicago, Ill.; St. Vincent de Paul Hospital, Brockville, Ontario, Canada. Sixth Edition, Enlarged and Revised to meet the exact requirements of the various State Boards of Examiners of Nurses. 12 mo. cloth, 550 pages, price $1.50 net, postpaid. A. F. Pattee, Publisher, 134 S. 1st Ave., Mt. Vernon, New York.

This well-known book—which we understand is one of the "best sellers" in the medical world—comes to us in something of a new form. Perhaps it would be more appropriate to say that it has "grown up". It has, in fact, with this sixth edition, widened out into a complete text-book on the science and practice of dietetics, including a presenttation of the latest results of research in the subject, a classification and discussion of food principles, tables of energy values, and several other features which did not appear in the former editions. To all of this the author has no doubt been led by the wide adoption of the book as a text by so many educational institutions and authorities throughout the country. Whatever may have inspired the step, we applaud its wisdom, and feel sure that it will enhance the value of the work far beyond the trifling increase of price which the addition has rendered necessary. The added features are well worth the extra fifty cents per volume. The book now stands complete, and represents really the last word on practical dietetics. We shall be greatly mistaken if the sixth edition does not enjoy a much more rapid and widespread popularity than any of the previous issues.

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# SOME DOCTORS OF FICTION.

By George Thomas Palmer, M. D.

## IX. SIR WALTER SCOTT. (1771-1832.)
### Some Doctors of the Waverley Novels.

THAT set of Scott's novels did not come from the old Judge's collection. It is mine and it came, as books should come, from my grandfather, through my father, to me. There are five, big, awkward volumes, with backs and corners of green, polished leather, and sides of marbled paper resembling in pattern and color, many jumbled and scrambled rainbows. And in these five volumes have been crowded the thirty-two novels of Scott—in miserably fine type and in old-time double-column pages. They were printed in Scotland—where Scott's work ought to be printed—about sixty years ago.

The way in which the sturdy covers have been loosened and the corners rounded, without the slightest evidence of mutilation or misuse, bears out the family tradition that my grandfather read the Waverley novels once each year, and my boyhood recollection that these clumsy volumes were, with the exception of Dickens, my father's favorites of all his genial company of books.

Scott was as prolific in creating characters as he was fertile in the production of plots for his tales. In fact, some systematic student has compiled a "Waverley Dictionary"*—a work of over 350 pages—for the sole purpose of cataloging and classifying the host of actors necessary to the performance of these heroic romances. Naturally we will find among them doctors of many kinds and scattered through a range of years extending from 1090, the period of "Count Robert of Paris," to 1800, the year in which transpired those interesting experiences at "St. Ronan's Wells."

But before we enter upon the discussion of the doctors of Scott's creation, let us chat for a while on Scott himself and those things about him which will particularly interest us as men of medicine.

Biographers contend—and upon the verdicts of biographers we must depend as unquestioningly as we would have our patients rely upon our professional opinions (in spite of the glaring differences of opinion of both biographers and doctors)—as I say, biographers contend that Scott derived his imagination and literary taste from his mother. If we can convince ourselves that she, in turn, inherited her rare gifts from her father, we will have established the fact, to our own satisfaction at least, that the world is indebted to the medical profession for the brilliancy of Scott's work, for her father was Dr. Rutherford, of the medical faculty of the University of Edinburgh.

But be this as it may,—and it will avail us nothing if the dogmatic biographers decline to accord to Dr. Rutherford his deserts—there is much about Sir Walter Scott which peculiarly interests physicians. As a child of eighteen months, he underwent a brief acute illness which caused "a shrinking and shriveling of his right leg," while the shape of the novelist's head has been the subject of discussion by laymen as well as doctors. We might speculate upon these physical defects ourselves, had not a well-known member of the medical profession already made his diagnoses and given them to the public; under which conditions, ethics and pro-

*"The Waverley Dictionary," by May Rogers. Chicago 1879.

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priety dictate that our lips shall be sealed. But our brother practitioner has gone exhaustively into the case and we are willing to accept his theories as ingenious if not altogether correct. It is thus that Dr. Charles Creighton diagnoses the case, in what we might term a literary post-mortem of Scott:

"Scott's lameness was owing to an arrest of growth in the right leg in infancy. When he was eighteen months old he had a feverish attack lasting three days, at the end of which time it was found that he 'had lost the power of his right leg,'—i. e., the child instinctively declined to move the ailing member. The malady was a swelling at the ankle, and either consisted in or gave rise to arrest of the bone-forming function along the growing line of cartilage which connects the lower epiphysis of each of the two leg bones with its shaft. In his fourth year, when he had otherwise recovered, the leg remained much shrunk and contracted. The limb would have been blighted very much more if the arrest of growth had taken place at the upper epiphysis of the tibia or the lower epiphysis of the femur.

"The narrowness and peculiar depth of Scott's head point to some more general congenital error of bone-making allied to rickets, but certainly not the same as that malady. The vault of the skull is a typical 'scaphoid," or boat-shaped formation, due to premature union of the two parietal bones along the sagittal suture. When the bones of the cranium are universally affected with that arrest of growth along their formative edges, the sutures become prematurely fixed and effaced so that the brain case cannot expand in any direction to accommodate the growing brain. Universal synostosis of the cranial bones is what occurs in the case of microcephalus idiots. It happened to me to show to an eminent French anthropologist a specimen of a miniature or microcephalus skull preserved in the Cambridge Museum of Anatomy; the French savant, holding up the skull and pointing to the scaphoid vault of the crown and the effaced sagittal suture, exclaimed, 'Voila Walter Scott!' Scott had fortunately escaped the early closure or arrest of growth at other cranial sutures than the sagittal, so that the growing brain could make room for itself by forcing up the vault of the skull bodily. When his head was opened after death, it was observed that 'the brain was not large, and the cranium thinner than it is usually found to be.' In favor of the theory of congenital liability, it has to be said that he was the ninth of a family of whom the first six died in very early youth."

What a debt of gratitude we owe to the accommodating coronal suture, lambdoid suture, squamosal suture and such other sutures as stubbornly declined to efface themselves, thereby permitting the brain of Scott to expand and bring forth the thrilling romances which we and our fathers have so thoroughly enjoyed! But we will dwell no longer upon the physical frailties of Scott nor upon the theories of his diagnostician, Dr. Creighton. A "medical fact" becomes a medical fiction in a year, so rapid are the strides of science, and Dr. Creighton gave forth his statement for the information of general readers and not to be the food for controversy of his brother practitioners of another day and generation. Whether Dr. Creighton be right or wrong, Scott's brain developed satisfactorily and he did very well on one good left leg.

We have already opened one of the volumes and have turned to a chapter in "The Abbott" (1820). According to our rigid rule—which is that we have no rules at all—we have ignored all order and system and have permitted fancy to

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lead us to this novel. It is the ninth of the Scott novels in the time of its action and the eleventh in the order of Scott's writings; but we reserve the right, in looking for the doctors of fiction, to start in the middle or at either end of any man's writings and we propose to browse along without let or hinderance. But by way of explanation, we will recall that "The Abbott" deals with Queen Mary of Scotland, from the time of her imprisonment at Lochleven Castle to her flight to England after the battle of Langside. And it was while the Queen of the Scots was imprisoned at Lochleven that she came in contact with Dr. Luke Lundin, the Lord of Lochleven's chamberlain, and a physician. facetious, pedantic and pompous.

> "Solemn indeed was he entitled to be * * * for he had been bred to the venerable study of medicine, as those acquainted with the science soon discovered from the aphorisms which ornamented his discourse. His success had not been equal to his pretensions."

In this introduction of Dr. Lundin, Scott has pointed out a character which has been noted by practically every keen observer among the writers of fiction—the disposition of very many medical men to drag technical phrases and professional aphorisms into their conversation with layment. And these writers of fiction have seen, what we ourselves must recognize, that this is a method by which many physicians conceal their ignorance. There are few ailments that flesh is heir to which cannot be explained in terms easily intelligible to the layman of ordinary sense and education, and yet, this is a fact so infrequently recognized, that a display of technical words still passes current, even among the most intelligent, as evidence of ample knowledge. Not long ago, I heard a popular physician declare with splendid gravity that "the supraspinal nerve centers were already obtunded and that, as a consequence, a fatal issue was inevitable"—and that gentleman was not Dr. Lundin, nor did he live in the reigh of good Queen Bess.

But there was no particular occasion for Dr. Lundin to stoop to pretense or affectation of superior knowledge. His position in the community was as unusual as it was comfortable, for, being chamberlain to the Lord of Lochleven, he enjoyed perquisites and privileges which, in the cold phraseology of the present day, would be designated as rich "graft."

> "The profits of the chamberlainship being moderate, especially in those unsettled times, he had eked it out a little with some practice in his original profession; and it as said that the inhabitants of the village and barony of Kinross were not more effectually enthralled to the baron's mill than they were to the medical monopoly of the chamberlain. Woe betide the family of the rich boor, who presumed to depart this life without a passport from Dr. Luke Lundin! for if his representatives had aught to settle with the baron, as it seldom happened otherwise, they were sure to find a cold friend in the chamberlain."

And this statement of Dr. Lundin's position brings me to the conclusion, which I should not have reached on a lesser authority than that of Walter Scott, that some doctors so enjoy the pretense of wisdom that they will utilize it quite as freely when it is wholly unnecessary as when it may bring them some paltry financial profit. But with all his pomposity, we must not conceive that Dr. Lundin had nothing to his credit. "He was considerate enough, however, gratutiously to help the poor out of their ailments, and sometimes out of all their other distresses at the same time." And life under the baron and under the immediate guidance of his chamberlain, is not pictured as a bed of roses.

"Formal in double proportion, both as physician and as a person in office, and

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proud of the scraps of learning which rendered his language almost universally unintelligible," it will be entertaining if not profitable for us to listen for a moment to Dr. Lundin's conversation. Speaking to a page, he says:

> "But as I had the honor to quote to her from the works of the learned Hercules of Saxony, *omnis curatio est vel canonica vel coacta*—that is, fair sir, (for silk and velvet have seldom their Latin *ad unguem*), every cure must be wrought either by art and induction of rule, or by constraint; and the wise physician chooseth the former. * * * I have made it my business to so blend instruction and caution with delight—*fiat mixtio,* as we say—that I can answer that the vulgar mind will be defecated and purged of anile and Popish fooleries by the medicament adhibited, so that the *prima viae* being cleansed, Master Henderson, or any other able pastor, may at will throw in tonics, and effectuate a perfect moral cure, *tuto, cito, jucunde.*"

That you have no conception of what the Doctor is talking about, from this brief quotation, need not concern you. Had I given you the entire conversation, you would be no better off. But having finished his discourse, the doctor invited the page to go with him to his shop, there to partake of "a cordial cup of sac, impregnated with wormwood—the best of anti-pestilential draughts." On the way to the pharmacy, Dr. Lundin pointed out his numerous patients, upon each of whom he made appropriate remarks which are well worth over-hearing:

> "Do you see that fellow with the red bonnet, the blue jerkin and the great rough baton in his hand? I believe that clown hath the strength of a tower—he has lived fifty years in the world, and never encouraged the liberal sciences by buying one pennyworth of medicaments."

And I must plead guilty of having felt the same resentment, in my early days of practice, against a hale and hearty gentleman, who invariably referred to me as his physician, and yet, who never had an ache or pain requiring my services.

> "But see that man with the *facies hippocratica,*" said the doctor, pointing out a thin peasant, with swelled legs and most cadaverous countenance, "that I call one of the worthiest men of the barony—he breakfasts, luncheons, and sups by my advice, and not without my medicine; and, for his own single part, will go farther to clear up a moderate stock of pharmaceutics, than half the country besides." * * * The next the doctor deigned to take notice of, was a lame fellow, by whom the the honer was altogether underserved, for at sight of the mediciner, he began to shuffle away in the crowd as fast as his infirmities would permit.
>
> "There is an ungrateful hound for you," said Doctor Lundin; "I cured him of the gout in his feet, and he now talks of the chargeableness of medicine, and makes the first use of his restored legs to fly from his physician. His *podagra* hath become a *chiragra,* as honest Martial hath it—the gout has got into his fingers, and he cannot draw his purse. Old saying and true, *'Praemia cum poscit medicus, Sathan est.'* We are angels when we come to cure—devils when we ask payment—but I will administer a purgation to his purse I warrant him."

And charlatan and fakir as Dr. Lundin was, we cannot but sympathize with him in the ingratitude of his patients. That the "ungrateful hound" attempted to avoid him and failed to pay his bill, does not signify that his gout was not cured, although his limp might indicate as much. In our own day, as in 1568, the doctor comes as an angel to make his cure; but is avoided as a devil when the bill is due.

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It is only to be lamented that all of us have not, for occasional use, the remedy for this ingratitude—a safe and certain means of purgation of the pocket-book.

Nor can we quite withhold our sympathy when Dr. Lundin rails at the cults and isms, the fakirs and the charlatans and the patent medicines which were in vogue in his day:

> "For my own part, I know of no such pests to the commonwealth as these old incarnate devils, who haunt the chambers of the brain-sick patients, that are mad enough to suffer them to interfere with, disturb, and let, the regular progress of a learned and artificial cure, with their sirups, and their julaps, and diascordium, and mithridate, and my Lady What-shall-call'um's powder, and worthy Dame Trashem's pill; and thus make widow and orphan, to cheat the regular and well-studied physician, in order to get the name of wise women and skeely neighbors and so forth."

But in this protest, Dr. Lundin shows what manner of man he is. He cries out against the imposition of charlatans and fakirs, as honest men should do. He deplores the popularity of these carrions who prey upon the illness and the ignorance of the people; but he manifests clearly that his concern is not for the welfare of the commonwealth; but is sordid and mean and selfish. He cares little that the ignorance of these pretenders may increase the ultimate suffering or bring about the death of their gullible patients; but much that the medical practitioners are "cheated" out of practice. And, incidentally, it is the popular suspicion of just such personal aims that has rendered the protests of the medical profession against fakirs and charlatans, so futile in our own day.

But there are times in the career of every medical pretender, however pompous he may be, when even the untrained eye may detect his real deficiencies in professional skill. So it was when Dr. Lundin was called by Lady Lochleven to determine if Mary, Queen of Scots, had been poisoned. The Doctor's evasions did little good with Lady Lochleven and his show of wisdom failed him in a time of emergency. "In one word, man, have they taken poison, ay or no?" she cried savagely.

> "Poisons, madam," said the learned leech, "are of various sorts. There is your animal poison, as the lepus marinus, as mentioned by Dioscorides and Galen—there are mineral and semi-mineral poisons, as those compounded of sublimate regulus of antimony, vitriol, and the arsenical salts—there are your poisons from herbs and vegetables, as the aqua cymbalariae, opium, aconitum, cantharides and the like—there are also——"
>
> "Now, out upon thee for a learned fool! and I myself am no better for expecting an oracle from such a log," said the lady.
>
> "Nay, but if your ladyship will have patience—if I knew what food they have partaken of, or could see but the remnants of what they have last eaten—for as to the external and internal symptoms, I can discover nought like; for as Galen saith in his second book *de Antidotis*——"

But Lady Lochleven would have none of him and sent forthwith for one of the female cultists against whom he had so bitterly complained.

But other doctors of fiction await us in the pages of Waverley. We must leave Dr. Lundin to his comfortable living, to meet another who is more in keeping with the thrilling romance of Scott—a vicious, unprincipled "pottercarrier"—Henbane Dwining. We find him in "The Fair Maid of Perth" (1828), and there Scott describes him "a thin, meagre figure of a man, whose diminuitive person seemed still more reduced in size and more assimilated to a shadow, by his efforts to assume an extreme degree of humility, and make himself, to suit his argument, look meaner

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yet, and yet more insignificant than nature had made him." But Smith, in his anger at the "Pottingar' designated him as a "walking skeleton, as asthmatic gallipot and a poisoner by profession," all of which terms, we are led to believe, being properly applied to Dwining without doing him the slightest injustice.

Henbane Dwining was far better suited to the wild tales of Scott and to the year 1402, than would be to our company of amiable doctors of fiction or the year 1909, for in his day poisoning was an important industry and brutality was at a premium. There are none of his type today; possibly because our civilization does not tolerate such men. And let us hope that, if the day of general brutality should come again, the medical profession would offer no candidates for the part played by Scott's despicable pottanger.

We find Dwining at the bedside of Sir John Ramorny, who had lost a hand in a street fight. Dwinging "viewed the naked stump with a species of professional satisfaction, enhanced, no doubt, by the malignant pleasure which his evil disposition took in the pain and distress of his fellow creatures".

But before we dismiss this odious character from our congenial company, we may follow him to the sick room to see if we like him any the better there. He had been called by a number of women to see a child suffering from "croup"—"membranous croup", no doubt, that apparently harmless name under which diphtheria has paraded even unto our own day and generation and has levied its tribute of thousands of lives. And Henbane Dwining knew the danger of the disease, for we hear him say:

> "*Cynanche trachealis*—that disease makes brief work. Show me the house instantly."
>
> "He was in the habit of exercising his profession liberally, notwithstanding his natural avarice, and humanely, in spite of his natural malignity. As we can suspect him of no better principle, his motive most probably may have been vanity and the love of his art."

And pray, may I ask, how much of the "medical charity", especially that of the great free dispensaries and the charity hospitals, is done and done well by members of the medical profession, with no motive nearer to the spirit of true charity than "vanity and the love of our art"? I ask this with no intention of reflecting upon the noble work of the great army of the medical profession, whose charity, as Ian Maclaren has said, "puts all others to shame", but I ask it candidly and my brothers in the medical profession may well hesitate before they answer.

But the motive of Dwining did not affect the successful treatment with the child with diphtheria, nor does the motive of the chief of the free dispensary decrease one whit the manifold blessings which such an institution is to the deserving poor of a community.

> "A Dominican monk sat near the bed, holding the other child in his arms, and seeming from time to time to speak a word or two of spiritual consolation, or intermingle some observation on the child's disorder.
>
> "The mediciner cast the good father a single glance, filled with that ineffable disdain which men of science entertain against interlopers. His own aid was instant and efficacious; he snatched the child from the despairing mother, stripped its throat, and opened a vein, which, as it bled freely, relieved the little patient instantaneously."

The gratitude of the mother, Henbane Dwining received coldly, and, it must be admitted, with some embarassment, for her husband, who lay in the room below,

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swatched in his burial clothes, had come to his death through the cunning of the learned and unprincipled leech.

We are not compelled, nor are we justified, in admitting a murderer to our assemblage. We have known Henbane Dwining quite long enough and should we know him further, we would know no good of him. Scott needed him as a villain, in tales in which villainy ran rampant; but so far as we are concerned, Scott may keep him.

But Dr. Quentin Quackleben is quite another type of man. We meet him in "St. Ronan's Wells" (1824) and are advised at once that it was he who first gave to the world the information that the waters of these mineral springs would cure any malady that man may acquire or inherit. He was consequently universally installed "First Physician and Man of Science" at the resort, "which last qualification he could apply to all purposes, from the boiling of an egg to the giving of a lecture." Introducing him to us, Scott says:

> "We have only to sum up this brief account of the learned Doctor, by informing the reader, that he was a tall, lean, beetlebrowed man, with an ill-made black scratch-wig, that started out on either side from his lantern jaws. He resided nine months out of the twelve at St. Ronan's, and is supposed to have made an indifferent good thing of it,—especially as he played whist to admiration. * * * He was, indeed, qualified, like many of his profession, to spread both bane and antidote before a dyspeptic patient, being as knowing a gastronome as Dr. Redgill himself, or any other worthy physician who has written for the benefit of the cuisine, from Dr. Moncrieff of Tippermalloch, to the late Dr. Hunter of York, and the present Dr. Kitchiner of London." He was a good-natured gormand, and by no means an unlikable fellow.

Aside from Dr. Quackleben, "the man of science", there were other dignitaries who assembled at the dinners given at St. Ronan's Wells. There was "the man of peace", the "man of law", "the man of mirth" and "the man of taste", and these characters become the more interesting to us when we know that Scott took them from his own associates among the brilliant men of Edinburgh, among whom were Burns, Monboddo and the scholarly Mackenzie.

Dr. Quackleben was the typical health resort physician. He was honestly convinced of the wonderful cures which the waters of St. Ronan's well would accomplish, he had the faculty of ingratiating himself with victims of hypochondriasis and of offering and rendering his profession counsel at any place of entertainment or even at the dinner table. He made himself indispensible in the gay social set, and yet he did not overlook the financial possibilities which lay among the sick of the less pretentious resorters. He placed few restrictions upon his patients, and, like Dickens' "Dr. Wosky", was a strong believer in a liberal diet and the judicious employment of stimulants.

But let us join him at a social function and judge for ourselves of his methods of practice.

> "A moment later she was relieved by the entrance of Dr. Quackleben, whose maxim being, that one patient was as well worth attention as another, and who knew by experience, that the *honoraria* of a godly wife of the Bowhead were as apt to be forthcoming, (if not more so), as my Lady Penelope's, he e'en sat himself quietly down by Mrs. Blower and proceeded with the utmost kindness to inquire after her health, and to hope she had not

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forgotten taking a tablespoonful of spirits burnt to a *residuum*, in order to qualify the crudities.

"'Indeed, doctor', said the honest woman, 'I loot the brandy burn as I dought look at the gude creature wastings it sell that gate—and the, when I was fain to put it out for very thrift, I did take a thimbleful of it, (although it is not the thing I am used to, Dr. Quackleben), and I winna say but that it did me good.'

"'Unquestionably, madam', said the doctor. 'I am no friend to the use of alcohol in general, but there are particular cases—there are particular cases, Mrs. Blower—My venerated intsructor, one of the greatest men in our profession that ever lived, took a wine-glassful of rum, mixed with sugar, every day after his dinner.'

"'Ay? dear heart, he would be a comfortable doctor that', said Mrs. Blower. 'He would maybe ken something of my case. Is he living, think ye, sir?'

"'Dead, for many years, madam', said Dr. Quackleben; 'and there are but few of his pupils that can fill his place, I assure you. If I can be thought an exception, it is only because I was a favorite. Ah! blessings on the old red cloak of him!—It covered more of the healing science than the gowns of a whole modern university.'

"'There is ane, sir," said Mrs. Blower, 'that has been muckle recommended about Edinburgh—Macgregor*, I think they ca' him—folk come far and near to see him.'

"'I know whom you mean, ma'am—a clever man—no denying it— a clever man—but there are certain cases—yours, for example—and I think that of many that come to drink this water—which I cannot say I think he understands—hasty—very hasty and rapid. Now I—I give the disease its own way at first—then watch it, Mrs. Blower—watch the turn of the tide.

* * Then he is a starving doctor, Mrs. Blower—reduces diseases as soldiers do towns—by famine, not considering that the friendly inhabitants suffer as much as the hostile garrison—ahem!'

"Here he gave an important and emphatic cough"—and here we may stop for a moment to consider good Dr. Quackleben.

In my acquaintance with doctors, I have found that one of the commonest mannerisms of the men of medicine, is to adopt some distinguished praeceptor or instructor, with whom, in their clear or distorted imaginations and recollections, they were once upon a footing of the utmost imtimacy, and to exalt themselves and their skill and attainments, by showing forth the glories of the old-time teacher. As great men of medicine find their ways to the faculties of the various medical colleges, and as they so distribute themselves that each may find a place in which he will shine preeminent, there is hardly a medical student who has not come more or less in contact with great physicians. And, inasmuch, as the professors in the various medical colleges usually work for nothing and make their livings as

*A foot-note in the 1856 edition states that Macgregor was really Dr. Gregory, of Edinburgh, who was a very successful physician, but who attained great notoriety on account of the very severe regimen to which he subjected his patients.

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specialists and consultants, there is a general disposition for the teacher to slap the student on the back and to so impress him that the student will, when he enters practice, become a "feeder" for the more distinguished man. Hence, there is some foundation for the familiar manner in which young physicians refer to their renowned teachers, and there is a strong temptation to impress that intimacy upon their patients. I have heard one weak young limb of medicine, who had attended Rush when Senn was in his prime, refer to that splendid surgeon as "Nick", and I have no doubt but that there were obscure physicians of the mintage of 450 B. C., who were known to speak of the father of medicine as "Old Hip".

In fact, I am not certain but that there have been many medical teachers who have attained fame and reputation, such as they would not have known otherwise through the extravagant phrase of the students who have received instruction under them. And that praise is usually given, not so much through reverence for "the venerated instructor", as to impress the people with the origin of the young practitioner's superior knowledge.

Quackleben's comparison of Dr. Macgregor's method of treatment with the soldiers starving out a city, has an exceedingly familiar ring. There is no method of treatment, however sane and rational, which cannot be brought to derision by clever simile.

But let us permit the "man of science" to continue his talk with his patient:

> "'I am no friend to excess or to violent stimulus, Mrs. Blower—but nature must be supported—a generous diet—cordials judiciously thrown in—not without the advice of a medical man—that is my opinion, Mr. Blower, to speak as a friend—others may starve a patient if they have a mind."

Dr. Quackenblen was certainly a "comfortable doctor" and he had the happy faculty of forcing his professional views to conform to the prevailing fad and fashion. Mrs. Blower complained that her ladyship's tea was exceedingly weak and that the seed cake was cut unnecessarily thin; but the doctor, with the tact which a resort physician should possess, met her criticisms in the following professional manner:

> "'It is the fashion, Mrs. Blower', answered Dr. Qucakleben; 'and her ladyship's tea is excellent. But your taste is a little chilled, which is not uncommon at the first use of the waters, so that you are not sensible of the me leave—you are a stranger, Mrs. Blower, and we must take care of you—I have an elixir which will put that matter to rights in a moment.'
>
> "So saying, Dr. Quackleben pulled from his pocket a small portable case of medicines—'Catch me without my tools', he said; 'here I have the real useful pharmacopeia—the rest is all humbug and hard names—this little case, with a fortnight or month, spring and fall, at St. Ronan's Well, and no one will die till his day come.'
>
> "Thus boasting, the doctor drew from his case a large vial or small flask, full of high colored liquid, of which he mixed three teaspoonfuls in Mrs. Blower's cup, who immediately afterwards, allowed that the flavour was improved beyond all belief, and that it was 'vera comfortable and restorative indeed'."

And Scott intimates that the elixir was the *spiritus vini gallici,* which still holds

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an honorable place in the British pharmacopaeia and which remains popular in these United States in spite of long continued activity of the American Medical Temperance Association and other estimable organizations. In truth, Dr. Quackleben was a comfortable doctor and one who would prove quite as acceptable to the well as to the sick, and the good doctor was of the opinion that the former require medical observation quite as much of the latter. Mrs. Blower had spoken of some woman who was in distress, but who was perfectly well physically, and regretted that the doctor could not be of service to her, and Quackleben replied:

> "'Ah! ha, ha!—why, then, madam, she needed a physician far more than if she had been delicate. A skillful physician, Mrs. Blower, knows how to bring down that robust health, which is a very alarming state of the frame when it is considered *secundum artem*. Most sudden deaths happen when people are in a robust state of health. Ah! that state of perfect health is what the doctor dreads most on behalf of his patient."

To you and to me, sitting quietly in the library, in a more or less critical state of mind, this paragraph seems greatly overdrawn, and yet to a woman of the dull wit of Mrs. Blower, the contention of the learned doctor seems quite sound and logical. She had never stopped to consider, what she now realizes to be quite true, that most very sudden deaths occur when the patient is in the best of health.

All of us who have had occasion to visit the mineral springs of the country have met the over enthusiastic, confident and conscientious physicians resident there and it is obvious that Scott had also met them. I have seldom met one of this class of men who has not prefaced his remarks with the assertion that "the water is not a cure-all", and who has not then enumerated practically all of the diseases, from abscess to zoster as being the particular ones in the treatment of which the water is beneficial. Dr. Quackleben is true to his calling and we hear him describe the virtues of the waters of St. Ronan's Well, in a very characteristic way, to a gentleman who had received a flesh wound.

> "Nothing so frequent, he could assure his lordship, as the opening of cicatrized wounds; and the waters of St. Ronan's spring, being, according to Dr. Quackleben, a remedy for all the troubles which flesh is heir to, could not fail to equal those of Barege, in facilitating the discharge of all splinters or extraneous matter, which a bullet may chance to incorporate with the human frame, to its great annoyance. For, he was wont to say, that although he could not declare the waters which he patronized to be an absolute *panpharmacon*, yet he would with word and pen maintain, that they possessed the principal virtues of the most celebrated medicinal springs in the known world. In short, the love of Alpheus for Arethusa was a mere jest, compared with that which the doctor entertained for his favorite fountain."

But Scott has another doctor whom we should meet and we are compelled to tear ourselves away from "the man of science' and his amiable companions. It may be well, in leaving Dr. Quackleben, however, to recall to your mind that the old fellow so convinced the simple Mrs. Blower of the necessity of medical care both during illness and health, that she decided to have a physician always with her, and she and the doctor were secretly married.

And now we have come to the most likable doctor in all the works of Scott,—Dr. Gideon Gray, whom we meet in "The Surgeon's Daughter" (1827).

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We are permitted to know this doctor first as he is about to adopt an illegitimate child which was left in the village, and we find him undertaking this charge with a kindliness and gentleness which distinctly pleases us. "It will be rather an amusement than a trouble to me", he said, "and I want to make some remarks on the childish diseases, which, with God's blessing, the child must come through under my charge".

And next we find him, broken in spirit over the death of his wife.

> "Gray felt the shock as men of sense and firmness feel a decided blow, from the effects of which they never hope again to raise themselves. He discharged the duties of his profession with the same punctuality as ever, was easy, and even to appearance cheerful in his intercourse with society; but the sunshine of existence was gone. Every morning he missed the affectionate charges which recommended to him to pay attention to his own health while he was laboring to restore that blessing to his patients. Every evening, as he returned from his weary round, it was without the consciousness of a kind and affectionate reception from one eager to tell and interested to hear all of the little events of the day. His whistle which used to rise clear and strong as soon as Middlemas steeple was in view, was now forever silenced, and the rider's head drooped, while the tired horse, lacking the stimulus of his master's hand and voice, seemed to shuffle along as if it experienced a share of his despondency. There were times, when he was so much dejected as to be unable to endure even the presence of his little Menie, in whose infant countenance he could trace the lineaments of the mother of whose loss she had been the innocent and unconscious cause."

For what is especially distressing in the life of a skillful and experienced physician and obstetrician, the doctor's wife had died during child-birth.

The relationship of Dr. Gray with the two medical students who were apprenticed to him, was such that any physician of the old day, when the praeceptor was an important figure in medical education, will enjoy reading about it. In fact, in his home life, his professional work and in his charity, Dr. Gray was the one evenly-balanced, admirable doctor pictured by Scott. There is little that we need say about him. He was of a common type, known to all of us who have known the great army of honest, sincere, competent and God-fearing physicians.

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### PRACTICAL BLADDER HINTS.

The *Southern California Practitioner* gives the following valuable suggestions for handling bladder troubles:

1. The bladder, when partially paralyzed from parturition or any other cause, can always be made to empty itself perfectly by throwing a large amount of very warm water into the bowel, thereby doing away with the necessity of using a catheter—a most important consideration, particularly when the patient lives at a distance from the doctor. After difficult and protracted labors, the writer has been obliged to use the catheter every day for weeks at a time, which was annoying to the patient and inconvenient to himself. Since using the above recommended plan, he has no trouble in this direction, the bowel and the bladder emptying themselves at the same time.

2. Pick out a medium-sized Jaynes catheter; pass it down until it strikes the obstruction and refuses to move another inch; fill a large aspirating syringe, holding two or three ounces, with hot water; couple the syringe to the end of the catheter, and gently force in the fluid, at the same time rotating the catheter; the pressure of the water forms a bladder-like sac at the end of the catheter, which force the glands back, and by the gentle rotation the catheter rides over the gland and the trick is done.

3. When you succeed in passing the catheter into the bladder in cases of considerable retention, do not empty it entirely or too suddenly, as it may give rise to hemorrhage, which is sometimes very profuse, or to severe cystitis, or even urinary suppression and death. It is well to partially plug the lumen of the catheter so as to allow the urine to dribble out.

4. In order to determine the quantity of solids passed in any urine, bear in mind that in health the patient should pass about six grains for every pound of the weight of his body. If he weighs one hundred and fifty pounds, he should pass about nine hundred grains. If the last two figures of the specific gravity be multiplied by the number of ounces passed in twenty-four hours, the result represents a quantity of solids equal to that many grains. To illustrate: If the sp. gr. of a specimen is 1020 and forty-five ounces are passed in twenty-four hours, the 20 of the sp. gr. multiplied by the 45 equals 900 grains. This rule can be applied to all quantities and specific gravities.

* * *

### TREATMENT OF ENURESIS IN CHILDREN.

Wachenheim, in the *American Journal of Dermatology,* sets out the premise that we are dealing with a habit neurosis; if we do so we are at once led up to the method of procedure that has, all in all, been the most successful, and would have been even more so if persisted in more confidently. The therapy of a habit spasm consists essentially in training or rather re-education, and this principle applies pre-eminently to the management of enuresis. The child must be trained to urinate at stated intervals during the day, in mild cases on rising, at nine, noon, three, six, and bed-time; in severe cases, at intervals of two hours. During the sleeping hours, the child should be roused at hourly intervals, until it is found to be dry; this will involve from one to four or even more rousings according to the severity of the case; in bad cases, an alarm-clock must reinforce unremitting patience on the part of the parents, unless a special night nurse is put in charge of the patient. No progress can be looked for until the child has actually ceased to wet itself regularly, and the attendants should take care not to be deceived by an occasional remission into a relaxation of the treatment. It is easy to see that, especially among the poorer

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classes, this regime will be carried out imperfectly, and with but partial results. On the other hand, it is unfair to charge the plan with failures that are due to its imperfect execution; even partial remissness in a training scheme for any form of habit spasm is sure to cause great retardation of the final cure, and this applies to enuresis as well as to other tics.

Herrman suggests, as a refinement of this method, that the child be urged to empty its bladder, as it were, in stages, say an ounce at a time, so as to gain control over this function still more rapidly and thoroughly. While, intrinsically, there seems to be considerable merit in this idea, it appears to me open to objection that it draws the patient's attention somewhat unduly to the genito-urinary apparatus. Young children are hardly sufficiently intelligent to carry out this procedure, in older ones there is some little risk of inducing masturbation by calling too much attention to the act of micturition and prolonging it unduly.

The training cure, by itself, is often ineffective; we are told that the child is found to be wet every time it is roused, the tic being so fully developed that it is practically continuous during sleep. Here we may aid matters by cutting off all fluids during the late afternoon and evening, thus reducing the secretion of urine to a minimum, and keeping the bladder as nearly empty as possible. The author made it a rule to add this feature to the treatment of every case; it is unquestionably a valuable adjuvant, and anything that tends to produce a prompt improvement is well worth considering, even in cases that seem comparatively mild.

With regard to medication, the author deals with only one drug, atropine, which he gives in fairly large doses, never less than gr. 1/150 twice daily at six years of age, and up to gr. 1/100 three times a day near puberty; larger doses are unnecessary and possibly harmful. This drug is undoubtedly of some value, when employed in combination with the training cure, for it is indeed one of our best antispasmodics, acting in this case on the unstriped muscle of the bladder. Owing to the complexity of the mechanism of urination, which involves both striped and unstriped muscles, besides cortical and subcortical nerve-cell functions.

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## POISONING BY MAGNESIUM SULPHATE.

W. F. Boos, in the *Jour. Amer. Med. Assoc.*, finds that magnesium sulphate in concentrated solution is absorbed, in part at least, from the gastro-intestinal tract into the blood. In six out of ten cases this absorption caused fatal poisoning cumulative poisoning may also be produced by frequent administration of concentrated solutions. It is not wise to give magnesium sulphate indiscriminately in cases of sochanical obstructions of the bowel, even dilute solutions will be absorbed, with consequent danger of poisoning. In cases of suspected magnesium poisoning large quantities of normal salt solution should be given intravenously. Dilute solutions of lime salts given hypodermically may also be of benefit.

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# The Medical Brief

A MONTHLY JOURNAL OF PRACTICAL MEDICINE.

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## EDITORIALS.

### THE MEDICAL GRADUATE

THE day is at hand when the youthful graduate, his hard-earned sheepskin in his hand, will bid farewell to his faculty and classmates in an elaborately prepared and imposingly delivered "valedictory", lightly descend the steps of his alma mater, and proudly align himself with the ranks of the practising physician. A proud and happy day! But there is always the "day after", and immediately following his graduation the newly fledged physician will find himself confronted with the cold, practical problem of what he calls "locating" (if only locating were all there was to the problem!).

In earlier days the problem was a simpler one. Then his course was at least simple, even if it was not so easy. There was but one thing to do, namely, to select a likely town, or rural district, and there hang out his shingle as "Physician and Surgeon", ready for any and every emergency that might come to him. For those were the days of the family doctor. Nowadays the problem is a much more complex one. So many possible courses seem open to the medical graduate. A vast difference has arisen, for example, between city and country practice. Shall he locate in a city or in the country, Specialism has developed apace. Shall he do general work or shall be specialize? Institutional medicine has opened up a wide new field. Shall he start in private practice, or connect himself with one of the numerous institutions scattered through the country? All of which offer a perplexing series of highly practical questions for the recent graduate's solution.

We have no idea at all that anything we may have to say on the subject will seriously influence any young man or woman who is facing this life-problem; at all events, not directly. Advice is cheap, and is held cheaply. Young people usually work such questions out for themselves, in their own way, regardless of counsel; and it is just as well that they should. No man can work out another's problems for him. Each has to live his own life, and make his own career, and the responsibility of choice and decision is his. Yet we would not therefore stand coldly aloof, like the gods on Olympus, "careless of mankind"—nay, we cannot. The memory of our own "commencement" (pregnant word) is too green in our mind and heart, and we are impelled to offer a word or two of friendly counsel and suggestion, even though we realize its impotence. Perhaps, after all, it may indirectly help to influence some decision and to shape some course for good.

Our view of the matter, then, would be that specialism and institutionalism in medicine are both done to death. There will be plenty of men and women whose course leans naturally and inevitably, by force of condition and circumstance, to these phases of medical work, without any new graduate deliberately and without

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special reason choosing them. The time is ripe for a return to the old state of "general practice," for carrying back into family practice all the marvelous fruits of specialism and institutional medicine, of which the modern student has reaped the benefit.

The public has become considerably wearied of specialism run to seed and of institutional medicine fast degenerating into materialism, and, while it recognizes the value of genuine specialism and legitimate institutionalism, it is crying aloud for a condition of affairs which will give it back the old personal relationship between doctor and patient, plus the advantages which flow, or ought to flow, out of modern organization.

The demand is as just as it is insistent, and, in our opinion, it constitutes the large opportunity of the present-day graduate in medicine. If the modern medical graduate can, in some way, bear in his person and his training all the magnificent fruits of twentieth-century science and technique, which the specialist and the institution have brought to maturity, and through his own individuality make them current in general and family practice, he will not only solve the problem of his own career, but help to turn the tide of medical progress into those broad channels by which alone it can effectually benefit mankind.

How, then, shall the modern graduate carry out this idea? By putting himself directly in the way of acquiring the advantages of modern specialism, and organization, and then putting himself equally directly in a position to translate them into general practice. We recommend that the young graduate, before he undertakes his life work, make himself thoroughly proficient in every form of medical and surgical work he is likely to encounter, from the practical side, either by attendance on a post-graduate course during the summer months, or by an interneship in a not too large hospital, or else by assisting some able and busy man in his practice. Having, by such a course, made himself thoroughly and broadly capable, self-reliant and experienced, we recommend that he locate in a small town or rural centre, where the surrounding country is good, and set himself to "take care of" everything that comes along, fitting up, if necessary, a small hospital or sanitarium, or making some arrangement with an already existing one in the vicinity, for the care of his surgical patients, and referring to the specialists only those cases which legitimately belong to him, that is to say, the exceptional cases for which the practitioner's resources are inadequate. Even in such instances the specialist should be called as the consultant and aide of the practitioner, and not as his supplanter or superior.

Such is our advice to the medical graduate of 1911—advice which, as we said at the outset, is gratuitous and little likely to be regarded. We believe, however, that it is sound advice, based upon trustworthy signs of the times, and morally certain to bring the young physician who follows it to success and a competence.

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## THE MEDICAL COLLEGE AND THE STATE

WHY all this fussing and fuming, this bickering and fault-finding, this charging and counter-charging, concerning and between medical colleges? Almost every week brings forth its contribution to the squabble. And, unfortunately, the washing of dirty linen—or of linen that is made to appear dirty—usually takes place in the open market-places, that is to say, in the lay press and other organs of publicity. The *casus belli* seems always to be the question of medical educational

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standards, if anyone knows just what they are; we confess we are becoming somewhat hazy about them, and have almost reached a point where we are willing to let such things arrange and adjust themselves. But those who engage in the controversy, like those who dispute about the purposes and ends of creation, appear to have very positive knowledge of what constitutes educational standards.

It looks to us a good deal like a case of the pot calling the kettle black, and even more like an attempt on the part of certain medical schools to get a little free advertising. We can see neither rhyme nor reason in the constant fire of complant and criticism that emanates from certain quarters against this and that college. We are recently told, for example, that in a certain city not a thousand miles from where we write, there are three classes of medical schools, to-wit, those (a very few) which take an active interest in making the aforesaid educational standards as high as possible, those which observe no more than the bare requirements of the law, and those which do not fulfil the stipulations of the medical practice act.

In the case of the last class, the matter is very simple. If they are not living up to the requirements of the law, let the State shut them up and put them out of business. It has all the necessary justification and machinery for doing it. For the rest, in every kind of industry and industrial education there always has been, and always will be, numerous grades. More than that, there always has been, and always will be, a demand and a field for the various grades. No doubt there are, in the intermediate schools referred to, students who, for lack of money and for other good and sufficient reasons, could not undertake a course in one of the high-grade colleges or universities. It does not therefore follow that they should not become physicians, or that there are not sections of the public who demand just such men. And if these schools are measuring up to the standards of instruction and equipment set by the State, and their graduates are passing the tests put forth by the State in the name and on behalf of the public, the object of complaint and criticism should be the State boards and not the schools or their graduates.

The real underlying truth is that the medical profession is beginning to realize what any discerning man perceived must be the outcome of the paradoxical condition of affairs as between State regulation of medical practice and academic administration of medical education. Following out the "American idea," the practice of medicine in this country has been put under the control of the State—for which, by-the-way, the profession itself is really responsible, since the movement which brought it about did not originate in any popular demand or sentiment, but was inaugurated by organized medicine for reasons best known to itself. Let that pass, however. The thing is done; numerous courts of authority have established its constitutionality; and it is highly improbable that it will ever be undone. We question very seriously if any legislature, except in the face of some pressing emergency, would ever renig on this proposition. Some of us have thought all along, and still think, that it was, and is, all wrong; that the proper place for the repose and exercise of regulating power, excepting only such as came within the province of the common law, is in the profession itself, as it is in England, where they do most things of a legislative and economic nature more wisely than we do. We do not believe there was ever any need, as we have said there was no popular demand, for medical practice acts and their complications. There was, and is, ample in the common law and the statutes of fraud and crime to adequately take care of all the police aspects of medical practice; and every other phase is the proper subject of professional regulation. But, as we have admitted, the thing is done past recall.

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We believe, however, that there is still a way by which the evils of the present system may be remedied, and its absurd anomalies corrected. It may perhaps be admitted that the practice of medicine has, in these modern days, assumed a somewhat more complex relation to society than it had in former times, and it may therefore be granted that its regulation, so far as these relations are concerned, may require special legislative enactments for its police supervision. Indeed, we are the first to insist upon the practice of medicine being hedged about with all the safeguards that the exigencies of the case require. But there is not, so far as we can see, any earthly reason for the State concerning itself with educational standards. That is certainly outside its province, and a dangerous function for it to undertake. Here, then, might properly be drawn a dividing line between State and professional control of medicine. Then would all this clamor and disputation about schools and colleges cease, and every medical school would stand or fall, as it ought to do, sheerly upon its ability to deliver the goods. The State has no legitimate concern with where and when and how a man acquired his education, or how much he paid for it, or where he got the money to pay (so long as he got it honestly), and just as soon as it interferes in such matters it breeds just the condition of affairs that now exists in medical education. If the State would attend to its proper business, and keep its hands off educational standards and institutions, these would follow the wholesome process of natural selection and the survival of the fittest.

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## MEDICAL PHARMACY

THIS journal has never taken any rabidly extreme position on the question of medical dispensing. We hold, in fact, what we regard as a sane middle attitude toward the matter. We believe that the inherent right of the physician, under his license to practice medicine, to dictate the remedy which shall be given to his patient includes the right to dispense that remedy if he shall see fit to do so. We are totally unable to see by what refinements of logic the opponents of medical dispensing are able—or fancy they are able—to separate the one function into two, so far as the authority of the physician is concerned.

We also believe, however, that, as a general rule, and wherever it is practicable, it is better to delegate the dispensing of prescriptions to the qualified druggist. We need not go into the numerous reasons for our opinion just here and now, because it is not the purpose of this editorial to argue the question of medical dispensing. Suffice it to make the simple assertion that, in our judgment, the interests of everyone concerned, doctor, patient and public, are best conserved by separating the offices of prescribing and dispensing whenever and wherever it is practicable to do so. But we make the assertion with the full realization that in a large proportion of cases —perhaps the vast majority of our readers—it is quite impracticable, and the dispensing by the physician of his own medicines is a virtual necessity.

Furthermore, we cannot help, as practical men, recognizing two distinct kinds of medical dispensing; one that doles out medicines in the shape of tablets, pillules, cachets, and even capsules, ready prepared by the wholesale drug houses and sold to the doctor, under their formulæ, all ready to serve to the patient who needs the respective drugs or combinations which they represent, and the other the compounding by the doctor of wholly original mixtures, usually in fluid form, and dispensing to the patient. The former type of medical dispensing is really a sublimated form

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of dispensing by the pharmacist; the latter is really what is in question when we speak for and against medical dispensing.

However, as stated, this is not intended as a discussion of the pros and cons of medical dispensing. We have already stated our views on that phase of the subject, and pointed out that in numerous instances it is imperative that the doctor be his own dispenser. In such cases we do not see how there can be the slightest question of the doctor's right to dispense. The only question that calls for attention, it seems to us, is whether his right finds a practical complement in his ability to do the work. If the practitioner finds it indispensable to dispense (pardon the quibble), then at least he must concede the responsibility resting upon him to qualify for the work.

Following out our views thus expressed, we believe that the office of a medical journal to its readers is far better fulfilled if, instead of frantically defending the right of the physician to dispense (which never has been and never will be in any serious danger), or with equal frenzy trying to persuade him into prescribing only, it recognize the sensible and rational exigencies of the situation, and set itself to minister to them by a proper furnishment of current information on the subject of pharmacy, as it relates to medicine. Indeed, whether a physician makes a habit of dispensing (i. e., compounding and distributing his own preparations) or confines himself to writing prescriptions for the druggist to fill, it is equally incumbent on him to maintain a more or less practical knowledge of pharmacy. For if the principle on which the doctor's right to dispense rests, namely, that what one may do through another he may do himself, be sound, then even the doctor who writes prescriptions is, in a sense, supervising the dispensing of the medicine, and he should have a working knowledge of that which he is doing through the pharmacist.

To this phase of medical practice we endeavor to minister by means of a special department of the journal, under the heading of Medical Pharmacy. We do not, of course, pretend to publish each month, or even in the course of a year, a text book of medical pharmacy. That is not our function, as a journal. That is the function of the text books themselves, of which many are on the market. But we aim to do in pharmacy, so far as it relates to the physician, what we purport to do in a much larger degree in medicine, that is, to keep the reader enlightened upon current advances and helpful suggestions. We have reason to congratulate ourselves that our readers have derived much useful information and practical assistance from this department. It is but one of the many signs that the MEDICAL BRIEF is alive to the interests and needs of the practitioner in every branch of his work, and that it serves those interests and needs with a corresponding breadth and perspicuity.

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# Experiences With Vaccines

By Henry M. Starkey, Rockford, Ill.

DR. STARKEY gives a comprehensive resume of the vaccine and serum situation down to the present moment. He traces the evolution and describes the significance and technique of the opsonic index; makes clear the differences between vaccines and serums; discusses the nature and value of stock vaccines; indicates the classes of disease in which they are useful; and gives an interesting and instructive account of his own personal experiences with this form of therapy, including several case reports. In these days a summary of this important subject cannot fail to be of both interest and profit to the general practitioner, and we therefore make no apology for the rather lengthy character of Dr. Starkey's article.

My experience, in my limited field with the use of bacterial vaccines has been such that I am certain that were these vaccines better understood by the general practitioner, they would be used with great advantage by him in his broader field. Consequently, this statement has been prepared, in the hope that it may be of some service to my brother physicians in their conflict with disease.

It is unnecessary to go into any extended discussion of the long and laborious steps by which we have arrived at our present knowledge of immunity, and the role played by the blood in preventing or lessening the invasion of the system by pathogenic micro-organisms, and in the destruction of such, as have gained entrance. From the earliest times of which there are medical records, it has been known that one attack of certain contagious diseases, secured immunity to the individual from subsequent attacks of the same disease, that a man, for instance, who has had small-pox can go among those suffering with small-pox with impunity. Why this is so and how the immunity is brought about was unknown, and unknowable, until the production of the higher power microscope permitted us to discover and study various micro-organism, and to build up the science of bacteriology, and later to learn as much as is now known of the constituents and actions of the blood in health and disease. Many men have been patiently laboring for years with reagent and microscope, and through their efforts more has been learned about the Anatomy, Physiology and Pathology of the blood in the present generation than in all previous time. While there are immense fields of knowledge concerning the blood still to be cultivated, we are beginning to have some conception of certain properties of this life fluid that are of the utmost importance, and without which properties mankind must long ago have perished from the earth.

Let us recall a few facts in HAEMATOLOGY well known to you all. The most active constituent of the blood, in the conflict of the living organism with deleterious influences, seeking entrance or having gained entrance thereto, is the large white corpuscles, the leucocytes. It has for many years been known that the leucocytes have the power to destroy the micro-organisms.

### The Opsonic Index Evolved.

In 1883 Metchnikoff reported his observations on this action of the leucocytes. He saw the white cells envelope and digest the micro-organisms in the blood, thus destroying them. He did not think that in this the serum did more than to stimulate the leucocytes, but

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twenty years later, Wright concluded from his studies, that the action of the serum is much more important, in that, it so prepared the bacteria that they are more easily digested. He thinks that without this preparation of the organisms for the leucocytes, that the latter have little power to destroy the micro-organisms. He found that this power to destroy micro-organisms varies much in different individuals, and in the same individual at different times. Further studies convinced him that this variability was due to certain substances in the blood serum, which he called OPSONINS, because they render the bacteria more acceptable to the leucocytes.

He also found that these opsonins are produced in the blood when micro-organisms gain entrance to it, each organism causing its own opsonin to be produced. It seems that it is the presence of the microbes, that causes the opsonins to be formed, and that dead microbes will increase them, as well as will living ones. Wright found that he could, by exceedingly complex and delicate technic, determine the amount of opsonin for any particular organism present in the blood at that time. This amount of opsonin in any particular case was determined, and so the OPSONIC INDEX was found and named.

His discovery that the opsonic index for any particular organism might be increased by bringing appropriate numbers of that organism, dead, and in a sterile solution, into the blood is of the greatest importance, in fact almost Revolutionary, —because it gives us power in certain diseases to so assist nature in the conflict that the disease is eradicated with much less danger and harm to the individual than is otherwise possible. He studied carefully the opsonic index in health and in disease, and, by elaborate and time consuming methods, determined the dose of the dead microbes to give in a certain case, and by watching the opsonic index determined the time when it is advisable to give another dose.

**Technique.**

In most cases he prepares the solution of dead organisms directly from the fluid obtained from the individual patient, and this AUTOGENOUS VACCINATION is the ideal method, because the same strain of micro-organisms that is creating the disturbance is given to the blood. But this elaborate technic is out of the question with the average, or even unusually well equipped active practitioner of medicine and surgery. Only those connected with large hospitals, and having unlimited assistance at their command can accomplish it. And in acute diseases the patient might either be dead or on the way to recovery before the examination could be completed. And so it has come about, that Clinical symptoms have in many diseases taken the place in diagnosis of laboratory findings, and stock vaccines are used instead of autogenous vaccines.

We must concede that Wright's methods are ideal, and that we should pursue them when practicable, and in chronic infections, the preparation of an autogenous vaccine is frequently, not only possible, but highly advisable. Pus or other secretion from the infected individual can be sent to a properly equipped laboratory, and a vaccine quickly prepared from this, and this vaccine injected in proper dose, and at proper intervals, will in many diseases cause such a change in the blood that the disease is quickly terminated. This is nature's method of curing microbic diseases, and if we can assist nature we are working along the line that has been pointed out by our teachers in medical schools, and which we have ourselves sought to follow from the days when we heard those teachers.

And this treatment seems absolutely harmless if the proper dose of vaccine is not exceeded. As in case of most remedies the effect produced, varies with the size of the dose. If too small a dose

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is given for the particular condition present, there is at once a slight improvement in that condition, but this improvement is evanescent. No harm has been done, however, and another and larger dose may be given. If the dose is just right there is at first a slight increase in the severity of the infection, lasting a few hours (6 to 24), followed by decided decrease of infection lasting five days or longer. It may be that this one properly graded dose will enable the blood to entirely eradicate the disease. If, however, the dose is too large there is at once a decided lowering of the opsonic index, with corresponding increase of the unfavorable symptoms, and this depression of vitality may last a week or more. We see then how important it is that we give a proper dose of these vaccines, and how unfortunate it is if we give an overdose. When tuberculin was first introduced, altogether too large doses were given and repeated too often, with the most disastrous consequences, and tuberculin quickly fell into disrepute. Wright pointed out how tuberculin acts, why it should be given in very small and infrequent doses and tuberculin is now being used much more, and with good results in many cases.

**Stock Vaccines and Their Doses.**

It is well known that certain diseases are an infection of a definite micro-organism. Thus diphtheria is always an infection with the Klebs-Loefler bacillus, pneumonia is always an infection with the pneumococcus, and typhoid is always an infection with bacillus typhosus. But there are other so-called diseases that are multiple in character, because multiple in the micro-organism causing the infection. Thus what is called rheumatism is probably a number of diseases, and while most commonly caused by the Staphylococcus Pyogenes, is frequently a mixed infection or caused by a different organism or may perhaps sometimes not be a microbic infection; and while appendicitis is most often an infection with the Streptococcus or Streptococci, and the Colon Bacillus, there is undoubtedly at other times another infection, and while an ordinary cold is usually the expression of infection with Streptocci or of Streptococci and Micrococcus Catarrhalis, the same symptoms are sometime produced by infection with other organisms. And yet in diseases that are most frequently caused by a particular microbe, or group of microbes, we may logically give a vaccine of that microbe because it is likely to be of benefit, but if the usual organism is not causative in this particular instance the vaccination will have no more effect than that much sterile water.

And so we come naturally to consider the doses of the vaccines that may be used in these doubtful cases. After many trials and experiments the average adult dose of many of these dead organisms has been determined and a number of reliable houses are preparing stock vaccines put up in single doses containing the number of micro-organisms that has been found an average adult dose. This full dose is usually given at once and repeated in from five to ten days as long as it is indicated. From what has been said in a previous paragraph it is seen that care must be exercised not to give too large a dose. In case of doubt, give a smaller dose and repeat it in less than five days if necessary.

**Vaccines and Serums.**

We must bear in mind that vaccines are not serums. A vaccine is a suspension of micro-organisms, killed by heat, in a sterile liquid, while a therapeutic serum is the blood serum of an animal which has been rendered immune to a particular disease by repeated inoculation with the germs of that disease. Thus the one being sterile is harmless, unless given in too large a dose, while the other has been found not always devoid of danger, even in small doses.

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Moreover the mode of action of one is entirely different from the other.

**Diseases Suitable for Vaccine.**

It may be thought that vaccines may be used wherever there is bacterial infection, and that the indication for their use would be much more pronounced in diseases caused by one known organism. In time such use may be proper, but at present our use of them is much more restricted. It has been found that local infections are much more amenable to vaccine therapy than systematic, and that mixed and somewhat uncertain local infections often respond promptly and permanently to stock vaccines. In the diseases of uncertain origin like acute rheumatism, the vaccine of the organism frequently causative may be given and will in many cases produce brilliant results.

For Acute and Subacute Articular Rheumatism we may give thirty million Streptococcus Pyogenes and repeat it every five to seven days.

For Acute and Chronic Bronchitis, Streptococcus as above or the same with one hundred million Micrococcus Catarrhalis.

For Scarlet fever, thirty million Streptococcus.

For Tonsilitis, thirty million Streptococcus.

For Otitis Media and Mastioditis, thirty million Streptococcus.

For Puerperal Infections, thirty million Streptococcus or this with forty million Colon Bacillus.

For Appendicitis, Streptococcus or Streptococcus and Colon Bacillus as above.

For Erysipelas, twenty million Streptococcus Erysipelates.

For Boils, Abscesses and Furuncalosis, one hundred million Staphylococcus Pyogenes Aureus and one hundred million Staphylococcus Pyogenes Albus.

For Acene, Mixed Staphylococcus as above increasing the dose to two hundred or three hundred million each, if necessary. In these two latter conditions Autogenous vaccines may well be employed.

These are examples only of diseases that have been successfully treated by therapeutic vaccination. Others will readily occur to you all.

**Personal Experiences.**

When Wright announced his findings and conclusions, and the therapeutic use of vaccines was becoming much discussed and tentatively employed in this country, the writer was greatly interested. It was my good fortune to hear one of the first authoritative papers on the subject written in this country, that of Dr. P. A. Ohlmacher (who, by the way, was formerly a student in my office), of Detroit, read by invitation before the Chicago Medical Society. The results that he had obtained were amazing. I have kept close watch of the reports since and I was asked frequently when in Chicago if I was using vaccines, my old office associate, Dr. Mann, in particular telling me of the good results he was obtaining.

Early last year I commenced in a very conservative way to try them in the cases for which they have been recommended. The good effects have been so numerous that they cannot all be ascribed to coincidence, and I find that each month we are using more doses than we did the month before. In a general way I can say that while in most cases the effect has been beneficial, and in many cases remarkably so, in some there has been no perceptible effect, but in none has there appeared to be any untoward effect. There is usually nothing to indicate the seat of puncture after a half minute or a minute, though in a few instances there has been an insignificant soreness at this point for a day or two.

Among those treated are the following:

Vaccines have been given in about a half dozen desperate cases, where there

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was little expectation that any good could be accomplished, but where good was hoped for, without any effect whatever. One of these was otitic brain abscess, to which the patient quickly succumbed. Another was a sinus infection, which proved to be cancerous. A third was chronic glancoma, and a fourth was interstitial keratitis not of syphilitic origin. A fifth was a case of tuberculosis, receiving injections of tuberculin, in which it was thought that there might be a mixed infection.

I have given injections in two cases of iritis of unknown origin with no effect. These were both patients that had had previous attacks lasting for months, and they pursued a similar tedious course at this time. Three cases of iritis however have made remarkably rapid recovery after injections of Staphylococcus vaccine. Two cases of Episcleritis with Phlyctenular Conjunctivitis of long standing, made quick recoveries after injecting mixed Staphylococcic vaccines. In one of these I injected Streplococci first with negative results, but improvement quickly followed the Staphylococci injection.

There have been ten cases of acute or subacute coryza with and without bronchitis, one having been treated for three attacks and two for two attacks each. Two of these were apparently uninfluenced by the injection, while the other eight were decidedly benefited, in some of them a severe cold disappearing in from twenty-four to thirty-six hours.

It should be stated however that coryza should receive local treatment at the same time that the injection is given. Both the patients in whom no effect was seen were given injections without other remedies. The writer had quite a reputation for ability to cut a cold short before he commenced to use vaccines, and he has found that the use of vaccines adds much to the efficiency of treatment, but he would not recommend the use of vaccines alone.

**Case Reports.**

A few of the cases treated will be noted, a little more in detail.

Case 1. Mrs. C. P. had within a year previous to last June had ten severe colds in the head. She came to me June 15th, with a fresh cold well under way. She was given mixed vaccine Streplococcus Pyogenes thirty million and Micrococcus Catarrhalis one hundred million, and told that she would probably require another injection in five days. She was receiving treatment for catarrh. The cold was gone in thirty-six hours, and there has been no recurrence and she has had no subsequent injection and no treatment of any kind for nearly three months.

Case 2. E. P., age thirteen, son of the lady just mentioned, has had something like hay fever each summer for several years past. The trouble comes on in June with corysa and bronchitis, and a cough and nervousness that prevent eating and sleeping, so that by fall the lad has been a physical wreck. The symptoms had been showing their usual severity for three or four weeks, when he came to me about the middle of July. I gave him vigorous local treatment and three-fourths of a dose of Streptococcic vaccine, and repeated it in one week. The symptoms were rapidly improved and disappeared within two weeks. He has come through the summer in good condition. Twice he has had some cold and has received injections, and the cold has disappeared.

Case 3. Mrs. S— has been apt to get a cold each fall that appeared as a sore throat, then next day as a cold in the head, quickly involving the bonchi and causing a cough lasting from one to two months. The usual cold occurred this fall about October 1st, and the sore throat of one day had passed into the coryza of the next, when to local treatment was added a dose of Mixed Streplococcus and Micrococcus Catarrhalis. In thirty-six hours the cold had disap-

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peared without bronchitis, and without cough and there has been no recurrence.

Case 4. D. N. student came to me July 9th, 1909, with rather severe Episcleritis and Phlgctenular Conjunctivitis of several weeks' duration. Thinking the Episelerities the more important, and probably rheumatic, I gave him beside appropriate local treatment an injection of Streplococci. As he was from a distance, I directed that he should return in a week. He returned without much change in condition, though the conjunctivitis was rather worse, though he said he had been faithful in the use of the remedies prescribed. I then injected a dose of Mixed Staphytococci and told him that unless the eye was much better within a day or two, that he must return and stay in town where he could be seen daily. He did not return for two weeks and then said that the eye became so much better in a day or two that he had not thought further treatment necessary. I have not heard from him since, so conclude that the eyes remain well.

Case 5. Mrs. F., who had been having recurring and exceedingly painful abscesses in the left ear for ten weeks came to me, an abscess having just formed and broken and there being an abundance of discharge in the ear. Examination showed this to be filled with Streptococci and Staphylococci and in addition to local treatment she was given a Mixed vaccine of Streplocci thirty million and Staphylococcus Aureus and Albus each one hundred million. The discharge disappeared within three days and there has been no recurrence.

Case 6. Miss W—, under treatment for chronic catarrh with middle ear disease and subject to severe attacks of cold in the head, usually lasting several weeks and increasing the ear trouble, came with one of her severe colds of two days' standing October 16th. She had a rather severe sore throat, and the nose was stopped, but the nose and eyes were flowing freely and she was altogether miserable. I gave her beside appropriate local treatment an injection of thirty millions of Streptococcus Pyogenis and one hundred million of Micrococcus Catarrhalis. She went from my office, without my knowledge, to a large unheated room, where she remained giving instructions for an hour or more. She went to bed soon after and was taken with high fever and severe sore throat, so that she thought she had caught more cold, and was in for a siege. The symptoms became so severe that before midnight she had to send for a doctor. The symptoms rapidly subsided and by morning she was so much better that she went out for her usual duties, which are very arduous. In a few days the cold had entirely disappeared, much more quickly she says than she had ever had one go before, and without bad effects to the hearing or otherwise.

I have noted this case a little more in detail, because first the effects of the injection were so very decided, and second, because it seems to me to be an example of just the right size of dose for the condition. It will be remembered that we said that a proper dose increases the symptoms in some cases at first to be followed by rapid remission; and while it is probable that some of the severe symptoms occurring after the exposure were due to that exposure, it is also probable that they were increased by the primary action of the injection given.

I have also for the past six months been giving to patients undergoing cataract or other operation a dose of Streptococcus or of Mixed Streptococcus and Staphylococcus vaccine as an immunizing agent; and while we cannot know just how the patients would have convalesced without this dose, the recoveries have been so uniformly smooth and uneventful that I cannot but ascribe some benefit to the injection. I now

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have a cataract patient about going home two weeks after extraction. She had the other lens extracted one year ago. Then she caught a severe cold with cough the fifth day, and developed an iritis, which did much damage to the eye. This time I gave her an immunizing dose the day before the operation and she has not had a bad symptom, and has coughed less than before coming to the hospital. Were I again dosing general surgery, I should try the experiment of giving an immunizing dose of the organism from which I most feared, subsequent infection before each important operation.

**Sources of Supply.**

As stated previously, there are a number of reliable houses that furnish stock vaccines. I first used those prepared by Geo. H. Sherman, M. D., of Detroit, because I had known him for many years and believed him a man of honesty and ability, and have continued to use them because I have found them reliable and efficient. But I hold no brief to recommend his products in preference to others.

**Conclusions.**

First. Laboratory findings and Clinical results have shown in the past five years that Wright's theories of immunity and resistance to infection rest upon a substantial foundation.

Second. Nature's method of combatting infection is to increase the numbers of leucocytes in the blood (leucocytosis) and to increase the ability of these leucocytes to receive and digest deleterious micro-organisms.

Third. Dead micro-organisms in the blood increase the ability of the leucocytes to destroy living micro-organisms.

Fourth. Stock vaccines may in certain cases he used with advantage to supply these dead organisms to the blood.

Fifth. It is probably true that stock vaccines may in certain cases be employed with advantage as immunizing agents.

Sixth. Where practicable autogenous vaccines are to be preferred to stock vaccines.

**ANCIENT CURES.**

An ancient custom among the Babylonians and Chaldeans, says the *Dietetic and Hygienic Gazette,* was to place their sick, both of body and mind, in the public square, so that any passerby who had been afflicted or known any one to have been afflicted in like manner, might acquaint the sick man with anything that he considered would be conductive to his recovery or relief. No one was allowed to pass the sufferer in silence, but must stop and inquire into the nature of his ailment. Shortly afterward these observations of cures were inscribed on tablets, which were suspended in the temples of the gods. It is said the walls of the sanctuaries of the Egyptians were completely covered with records of this description. The priests of Greece adopted the same practice. We find in the writings of Hireon Mercurialis descriptions of several of these votive memorials which well illustrated the curious character of the custom. To quote: "Some days back a certain Caius, who was blind, learned from an oracle that he should repair to the temple, put up his fervent prayers, cross the sanctuary from right to left, place his five fingers on the altar, then raise his hand and cover his eyes. He obeyed, and instantly his sight was restored, amid the acclamations of the multitude. These signs of the omnipotence of the gods were shown in the reign of Antoninus." "A blind soldier named Velerius Apes, having consulted the oracle, was informed that he should mix the blood of a white cock with honey, to make up an ointment to be applied to his eyes for three consecutive days; he received his sight, and returned public thanks to the gods." "Julian appeared lost beyond all hope from a spitting of blood. The gods ordered him to take from the altar some seeds of the pine and to mix them with honey, of which mixture he was to eat for three days. He was saved and came to thank the gods in presence of the people."

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# Care of Woman's Breasts

By W. T. Marrs, M. D., Peoria Heights, Ill.

A RATHER platitudinous and time-worn subject, will possibly be some reader's hasty criticism of this article. But we beg to remind such a critic that subjects that have become platitudinous and time-worn are precisely the very subjects which need revivifying and reiterating, because such a state of affairs is a confession that they are already beginning to lose their hold upon our attention. Such subjects need, above all else, presentation by a teacher who combines a wholesome common sense with a snappy personality; and these two qualities are admirably exemplified in Dr. Marrs. So those who came to scoff at the plainness of the subject may remain to marvel at the brightness of its treatment.

This is a matter that has not had as much attention from the profession as its importance demands, mainly due to the fact that it has been usurped by irregulars in consequence of which it has in some measure fallen into disrepute. The perfectly developed breasts of woman have constituted a theme for poets and artists to exercise their brush and pen upon since the beginning of civilization. Men today as well as in all times past regard the woman with imperfect bust development as being painfully lacking in one of the essentials that go to make a loving wife and mother. The breasts being a part of the reproductive system, if they are in an impaired state of nutrition it has an effect upon the woman's health and character after the manner of defects in the ovaries or uterus. The mammae, or breasts, in the healthy and normal female are hemispherical in shape and should be of generous size. They should be firm to the touch and the long diameter be directed outward and upward toward the axilla. The normal outline is conical and should converge toward the center in slightly curved lines which blend into the nipple. The latter if in a normal condition undergoes a slight erection from irritation, but its surface is naturally wrinkled and provided with numerous papillae.

The structure of the breasts is mainly fat and cellular tissue with an admixture of lobes and lobules which become smaller and smaller, ending in the lactiferous ducts. Near the base of the nipple, and upon the surface of the areola, are numerous sebaceous glands which become much enlarged during lactation and present the appearance of small tubercles beneath the skin. The nipple and areola are of a somewhat pinkish hue except during pregnancy and lactation, and when these do not resume their roseate color it is a matter of regret to all sensitive women. Flabby breasts and a discolored areola with perhaps retracted nipples cause much worry to women in the same manner as does unkempt underwear. The mental influence of knowing that one is presentable should necessity demand it counts very much with the female sex. Aside from the cosmetic effects, which are not to be disregarded, women instinctively know that mammary imperfection detracts from true femininity. It may be a difficult matter on which to philosophize, but we do know that the flat-breasted woman is prone to qaulities that do not make for marital happiness and felicity. She is likely to be high-tempered, jealous, excitable and wear the look of being continually watching for surprises. Men instinctively turn from women who are lacking in this par-

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ticular and rather seek those who possess a fuller bust and embonpoint, although perhaps plain of face and feature.

There are a number of causes for the breasts never attaining their full measure of plumpness and rotundity as well as a number of conditions that operate to produce involution or shrinkage of those that have once been generously developed. In young and childless women anemia, hard study, worry and other mental causes are a fruitful source. Anything that hinders the circulation in these parts may arrest the development and cause atrophy of the fat and glandular tissue composing the bulk of the breasts. Tight corsets, pads, etc., cause an injury that is quite well known. Also "plumpers" made of hair and other material which are worn to give the impression that nature has done her duty cause harm by impeding the circulation. Along about the eighteenth century it became for a time fashionable in France to wear a heavy leaden disc over the breasts to flatten them out and so nearly as possible eradicate them. The results were so far from gratifying that the custom was soon wisely abandoned. In women who have reared children excessive lactation is one of the prominent causes of mammary defects, especially the stringy, pendulous variety. Sucking after the milk supply has become nearly exhausted has the effect to take the tone out of the erectile, elastic tissue. Ill-health in its varied forms, lack of outdoor exercise, depressing mental influences and a failure to try to keep young and winsome are a few of the potent causes of a waning bosom.

Every woman who possesses normal mammary glands should endeavor to preserve them in that state, and she who suffers any abnormality in this regard should by all legitimate means try to cause an improvement. As the breasts develop a rejuvenating influence is exerted upon her life and character. There is nothing that will act like magic in developing the bust, and secret remedies and routines are a waste of time and money. Every woman should learn that a healthy bust is in considerable measure the reflex of good health and a harmonious life and character.

There are on the market a great many skin foods that may be useful as an adjunct to massage in developing these organs. Cacao butter and oil of almonds are the essential ingredients of all these. High-priced and highly-advertised preparations are no better than those just named. In using any of these foods the finger tips should be employed to apply the remedy, beginning at the lower and outer corner of the breast and rubbing inward and upward. If this procedure be employed persistently results are sure to follow in time. The woman should practice deep breathing exercises in the pure air and should take plenty of exercise outdoors. She should strive to cultivate health in every way and endeavor to look upon life from an optimistic angle. No matter what her circumstances in life may be she needs a dash of sentiment and to embrace the idea that one should grow old gracefully. I have tried to emphasize the fact that the cause of this defect may be as much mental as physical.

In addition to the suggestions already made I desire to call attention to the value of bathing the chest with cold water. This should be done two or three times daily and there is no procedure that quickens the circulation in the breasts so well as this. It should be employed for at least five minutes and should be followed by gentle, upward massage until the tingle of warmth is felt in these organs.

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### SPECIALIZATION.

A young medical student was being quizzed by one of his teachers: "In what will you specialize?" he was asked. "Diseases of the nostril," replied the student. "Good," said the professor, enthusiastically. "Which nostril?"

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# Vivisection

By Edward Wallace Lee, M. D., New York City.

THIS journal has already demonstrated, in no uncertain fashion, and even at the risk of its popularity with its readers, that it holds a broad and open-minded attitude toward the vexed issues of vivisection. We give hearty welcome to a fair and unprejudiced presentation of either or both sides of the subject. And we must admit that the present article is a sane and able presentation of the vivisectionist side. Dr. Lee does not mince words, but neither is he bitter or vindictive toward those whom he opposes. He has a keen sense of proportion, which is after all the prime requisite in dealing with such a question. With ready wit he answers some of the hyper-religious objectors to animal experimentation on their own ground; but the larger part of his paper is a serious argumentation of his case, which we should think would satisfy the most exacting. Throughout he is eminently sane and reasonable.

"If it is possible to perfect mankind, the means of doing so will be found in the medical sciences."—Descartes.

This statement will not be credited by millions of people. Why? Because they do not know the facts which prompt this assertion. From the beginning of time the natural, legitimate, scientific medical profession has been interfered with. Its progress has been obstructed, its true desire has been thwarted. By what? Ignorance and superstition.

What is the ultimate object of medical science? It is the betterment of all living creatures. The term medical science covers a large scope. It includes care of the sick, care of the injured, hygiene in its broadest sense, and, above all, the prevention of disease. He who can prevent a disease is far greater and of more benefit to humanity than he who can cure it. The stability of any government or nation depends on the good health of that government or nation. The more good health a nation or government has the better and more human will that government be. All scientific investigations have been obstructed. By what? Ignorance and superstition. Men have been burned at the stake. For what? Saying there were other worlds than ours.

Especially has the medical profession been obstructed in its desire to benefit humanity. The medical profession has been looked upon as ignorant, cruel, useless, as something emanating from the Devil. The development of chemistry has been considered simply tricks of the Devil. There was a time when the dissection of the unclaimed, friendless dead body was considered a crime, and the dissector punished, but that did not prevent the almost absolute knowledge we have today of the human anatomy. Neither will the "Antis" in any direction prevent the development of knowledge which is going to be of benefit to mankind in general. The universe was not developed for man alone, but at the same time man is the highest order of an intellectual standard. The higher man is developed intellectually the greater will be his ability to obtain education. In time intelligence and education will solve the problem of mankind, and there will be no need of Anti societies.

In criticising the anti-vivisection crusade which is at present, I believe, unneccessarily agitating the minds of good people, I shall deal with facts gained from a knowledge based on personal observation. When a student of medicine I was taught vivisection. I was taught, and firmly believe today, that it was absolutely necessary that I should gain knowledge in that direction and from that source. My professors and instruc-

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tors were scientific men, gentlemen in every respect. They performed experiments upon living animals with and without anæsthetics. When I say they were gentlemen, I mean that they were of that class who would not under any circumstances inflict cruelty upon any living creature.

I cannot help but take exception to statements, pictures and letters, and in fact the general discussion that I have read in the press. I will admit that the people who are at the foundation of this present agitation are honest and that they truly believe that they are promoting what they consider to be good principles. But I will say, I believe they are mistaken, they are wasting energy. Why? Because they are not acquainted with the facts. I admit there are many arguments in favor of the anti-vivisectionists, but at the same time I maintain that the facts are in favor of its procedure. I do not believe that cruelty should exist anywhere. Anyone who would maliciously and with intent inflict cruelty upon any animal is a moral pervert, and should be so considered and treated accordingly, but the crimes in this direction should in no way limit the legitimate benefits which would and do devolve from this procedure. The pictures which have been brought forth in the press are exaggerations; they are not actual photographs; they can do nothing but bring up horrible thoughts in the imaginations of sensitive people. Many of the statements are exaggerations and absolutely without scientific reasoning. For instance, when one writer says, "Why do not doctors who believe in vivisection perform these experiments upon themselves?" Many a doctor has been the subject of vivisection. Why? For the benefit of mankind. I myself have submitted to the surgeon's knife in case of skin grafting. Another one, and that a divine, finds fault with the medical profession because its prescriptions are written in a "foreign language." This argument is so foolish that it cannot be answered.

There is one question which presents itself to my mind, and that is this: Is it from a humanitarian standpoint wholly that this crusade is being made against vivisection? From the manner in which complimentary notices have been published one would be inclined to think there was a selfish motive back of this crusade.

Regardless of what other men may say either pro or con regarding this subject, I speak from person experience. I know that the science of toxicology, physiology, anatomy, surgery of the brain, surgery of the chest, surgery of the abdomen, and in fact, surgery in general has been greately benefited, and we would not today be in the position we are to benefit mankind, had it not been for vivisection. Especially will I refer to toxicology, the treatment of persons who have been poisoned. The aid that we have been able to give people who have suffered from poisoning has bene largely gained by experiments—so called vivisection.

It is not my province to go into the details of these various experiments, either in surgery or medicine, but I want to state as a fact needing no argument that these experiments have been carried on legitimately and humanely, and have been of vast and undying benefit to mankind.

The great English surgeon, the late Lawson Tait, has been referred to as opposed to vivisection. Regardless of what he may have said; regardless of what any one can say, I wish to make this statement: Lawson Tait in a way was a genius, he accomplished great things with little knowledge, but the very foundation of his success depended upon the knowledge that had been gained through the experiments first of pasteur and later on of Lord Lister. When a medical man denounces vivisection, I am sorry, for if he has any knowledge at all on the general subject of

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medicine it simply shows that he does not appreciate the knowledge he has gained through vivisection.

Many of the letters in the press have a malicious intent, they denounce the medical profession or those who believe in vivisection as cruel and ignorant. This I deny. As I have said before, anyone who would maliciously inflict unnecessary pain on a living creature is insane, and his actions are not to be taken into consideration when dealing with a scientific subject. No more should vivisection be denounced by the actions of irresponsible men than should Christianity be denounced by those fanatics who thought it was necessary to resort to the infliction of punishment and death upon living beings simply because as they thought they had received Divine instructions to sacrifice or punish some human being.

One thing the anti-vivisectionists must take into consideration, and that is sacrifice. Sacrifices have been made and always will be made for the benefit of mankind. To sacrifice a few for the benefit of the whole is not only scientific, but divine. Special headlines have read: "A voice from the pulpit." It is not the first time that the pulpit has voiced ideas which had a tendency to obstruct the development of science. That fact that a voice comes from the pulpit has no scientific basis whatever; it depends upon the brains back of the pulpit.

Sacrifices of ever description, as I have said, have been made for the benefit of mankind. God sacrificed millions of people at the time of the flood for the benefit of mankind. Moses received a prescription of God directing him how to treat the plague and leprosy, which was in a way experimentation upon animals, which today by certain people would be considered cruel. Samson, God's chosen strong man, tied firebrands to the tails of three hundred foxes in order to be of benefit to mankind. Christ himself in order to be of benefit to mankind cast the devils out of one man and put them into two thousand pigs, chased them down the mountain and permitted them to choke to death in the sea. Was this a sacrifice? was it cruel? If it was, it was for the benefit of mankind.

I have been in the continual study and practice of medicine for nearly thirty years. I have seen vivisection experiments in London, Paris, Berlin, and many other European cities, and the principal cities of the United State, but never yet have I witnessed any experiment that was not conducted under the most humane procedure. I have never yet seen any of those heartless doctors or experimenters referred to in the press. All experiments cannot be conducted under anaesthetics. If they were it would destroy the object which the experimentor wishes to obtain. It is just another question of sacrificing a few for the benefit of the many.

Considerable fault has been found, and even resolutions have been adopted denouncing Mr. Rockefeller's laboratory. Without argument I will say this: If the scientific gentlemen in charge of that laboratory accomplish their object, namely, the development of serums to mitigate or cure the ravages of certain diseases, as for instance, cerebro-spinal meningitis, they will accomplish a good of more benefit to mankind than anything else that I can think of, or anything that can enter into the minds of a human being. Did any of these anti-vivisectionists ever see a child die of cerebro-spinal meningitis; of hydrophobia; of lockjaw? If they had they would simply take into consideration the unimportance of a few guinea pigs, a few dogs, or a few rabbits compared to the life of a human being.

If the press wants to present horrible pictures, let it show or depict in its most graphic cartoon form, children dying

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with the above diseases, and then compare that to the experiments made upon a few animals. Did any of the anti-vivisectionists ever see a child choke to death with diphtheria? If they have and are capable to recall its sufferings, let them make comparison with the inoculation of a big strong horse with the diphtheretic serum.

A letter published stated that many members of the medical profession were in favor of this anti-vivisection crusade, but would not express such favor because they were controlled by the leading minds of the medical profession. This I deny. Every honest scientific medical man stands on his own intelligence, stands on his reason. That is the basis of science. A medical man is not swayed one way or the other.

There is no profession on earth that clings more to absolute knowledge than does the truly scientific medical man. All the medical profession asks is knowledge, and what I mean by knowledge is absolutely demonstrated facts. The truly scientific medical man is not affected by eloquence, by argument, by sentiment—he has one object in view, viz.: the acquirement of knowledge for the benefit of mankind.

The extreme sensitiveness of animals and their sufferings under experiments emanate largely from the minds of the anti-vivisectionists. I have had occasion a great many times to operate on animals with and without anaesthetics, and within a few minutes I have seen the animal take its food and to all appearances had forgotten the operation.

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### THE ACTION OF THIOSINAMINE.

Accordling to Frank Charteris in the *Glasgow Med. Journal,* thiosinamine preparations produce no definite alteration in the blood count whether administered by the mouth or by subcutaneous injection. Even when this administration is prolonged over weeks the blood undergoes little change. There is no evidence of chemotaxis. He has found the therapeutic resutls of thiosinamine treatment most disappointing. He has tried thiosinamine or allied preparatious in cases of keloid, rheumatoid arthritis, locomotor ataxia, chronic diffuse fibrositis, Dupuytren's contraction, &c., but with no appreciable benefit. The drug though usually well borne, may produce poisonous symptoms. The usual course of events in such circumstances is violent vomiting and nausea, with rigors and great weakness. The pulse is rapid and fever persists for a day or two.

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### THEREAPEUTICS OF COLLOID MERCURY.

G. Arbour Stephens, in the *British Med. Journal,* commenting on the disadvantages of many of the methods of administering mercury, refers to colloidal mercury, prepared by passing an electric current through water containing a portion of the metal (*see Prescriber,* 1907, p. 237; 1908, p. 118). He finds it act as a very powerful antiseptic, non-irritant, non-corrosive, and relatively non-toxic. Externally, he has found it useful in ringworm and in alopecia areata; as a mouth wash it is very effective in septic conditions of the mouth; as a spray it is serviceable in diphtheria; internally he has found it give relief in acute gastritis given in doses of 20 to 30 minims (1.3 to 2 c.c.). Its great value is in syphilis, and the author cites several cases in which it was successfully.

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### THE CHOICE OF A DIURETIC.

Eustace Smith in the *British Med. Journal* reviews at some length the different diuretics in use and discusses the indications for their employment. In acute renal dropsy the saline diuretics are the only remedies that can be given without risk of further injury to the affected organs. When the acuteness of the attack subsides, digitalis, preferably in the form of fresh infusion, may be given; and as improvement advances, caffeine, diuretin, and spirit of juniper.

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# Personal Experiences With Salvarsan

By Philip A. Harry, M. D., Leeds Infirmary, England.

REALIZING the wide-spread interest with which our readers are watching the course of Ehrlich's new remedy for syphilis, we have asked for a special statement on the subject from an English gentleman of whose experience we have certain knowledge, and in whose judgment we have great confidence. The statement is so characteristically terse and to the point that it needs no summarizing; it is itself a summary. We desire only to call attention to its impartiality, and to the practical suggestions it contains as to dosage, administration, etc.

The following are some conclusions arrived at after more than 100 injections of the drug extending over a period of six months:

The method followed is to divide the dose in the case of adults, 0.3 gramme is given intravenously and 0.3 gramme, intramuscularly. In the case of patients below 14 years of age the whole is given intramuscularly half into one buttock and half into the other. Fifty children below fourteen were injected for Congenital Syphilis. In every case the Wassermann test was performed first.

The intravenous injection was made into one of the veins in the elbow—the median basilic or median sephalic—the whole arm being carefully prepared beforehand, in every case a fine emulsion of the drug was used.

Immediately after injection the symptoms are more or less those of shock, there is a feeling of oppression in the thorax and some congestive headache, the temperature rises, thirst and dryness of the mouth is complained of, in some cases the pallor is marked and may even be alarming.

This is usually followed by a stage of excitement in which the patient weeps, shouts and becomes extremely restless. Micturition is frequent but scanty and the patient very often breaks out into cold perspiration, After the first 3 or 4 hours there is usually a return to the normal. The temperature, however, may remain elevated for 3 or 4 days.

Apart from this primary rise there is a definite secondary rise, which has been noticed chiefly in children. It occurs at the end of the second week after the injection. The thermometer may register 102° or 103° F. The pulse and respiration are correspondingly increased. On several occasions this secondary rise has suggested the onset of some acute infection. It occurs just at about the time the patient is about to return home. The usual accompaniments of infectious diseases are absent. The face becomes flushed, no marked pain or discomfort is complained of. The large quantity of fluid consumed by the patient can be explained by the height of the temperature.

In this series apart from the collapse immediately after the intravenous injection, and the secondary rise, no alarming symptoms have been noticed, no case of optic atrophy could be attributed to the injections.

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Several late results were, however, noticed. Deafness is undoubtedly increased, while in two cases convulsions occurred in the third and fourth week.

In one case paresis of one of the ocular muscles was noticed. In many cases there were alterations of the tendon reflexes.

Relapses have occurred as early as one month after an injection.

Two cases of undoubted syphilitic iritis in one eye, which cleared up in 3 or 4 days, returned in about a month with a marked iritis in the other eye. These were the cases of earliest relapse. They were husband and wife.

Another important lesson has been learned from this series, and that is, in the case of mixed infection and syphilitic and gonorrhœal salvarsan will not produce a satisfactory result by itself; genococcal vaccine must be used as well. This has been repeatedly noticed in cases of acute iritis, single or double, where the patient confesses to a mixed infection. It is not until gonococcal vaccine (5, 10 or 15 millions) is injected before the eye condition clears up.

It has not been found advantageous to proportion the dose to the body weight. The desire has been, on the other hand, to administer a maximum dose. Exception should, however, be made in the cases of feeble patients with obviously low vitality. Cases of nervous and skin diseases require to be carefully watched.

The result in the majority of the acquired cases is remarkably good; the opposite is, however, the case in congenital syphilis.



## GALVANISM IN APHONIA.

Johnson reports, in the Lancet, a case of aphonia of twelve years' duration following laryngitis, and a similar case of more than two years' duration, both of which were successfully treated by means of external faradization. The secret of success lies in the regular and persistent use of mild currents, which are not calculated to produce violent contractions of opposing healthy muscles. Where the laryngoscope shows marked swelling and congestion of the cords the mucous membrane must be attacked vigorously on orthodox lines, and here again one is likely to meet with little success if the nasopharynx is in an unhealthy condition. The author urges the necessity, in any given case, of making sure that the aphonia has really resulted, from such simple causes as catarrh, overstrain, or a combinats of both. Thoracic aneurysm, lesions of the central nervous system, malignant growths, the ulceration of syphilis or of tubercle—these must always be borne in mind as sinister possibilities, and it is at least a waste of time to employ faradization in the case of a patient who subsequently dies from cancer or who is in condition to be cured by iodide of potassium.

Every discoverer must follow a thread of successful theory if he would reach light and gain the longed for goal. It does not seem to matter whether the thread is pure silk or merely shoddy, so long as it leads the proper way. This theory of the therapeutics of the cell may not be the true one, but one is foolish indeed who, when in darkness and complexity of windings, refuse all clues until they are quite sure they have struck the right one. Every thread, no matter where it leads, helps on to knowledge and should be religiously followed until one is found giving better results.

I will not theorize further, but will urge you to study carefully the general condition of your patients and learn how to intelligently use your remedies to improve their condition, and if you are sympathetic and honest with yourself and mankind, you will have a glorious measure of success in the practice of medicine.

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# A New Theory of Tuberculosis Therapy

By C. H. Diehl, M. D., St. Louis.

THIS article constitutes a mere preliminary report of a theory in tuberculosis therapy. Its author, who is a very modest gentleman, was exceedingly diffident about making it public in its present fragmentary and crude form; but we pointed out to him that the advantage of a preliminary report was that it set many others to thinking upon the same lines, and often brought forth unexpected "leads," and upon this representation Dr. Diehl kindly consented to allow the communication to appear in its elementary form. We bespeak for it from our readers a thoughtful perusal, and trust that many will find themselves stimulated thereby to express their own ideas and possibly experiences in regard to Dr. Diehl's rather novel theory.

In view of the numerous theories which have been advanced pertaining to the etiology and treatment of tuberculosis, no one of which has as yet proven itself sufficient to the situation, perhaps another suggestion may not be out of place.

It is nowadays an established fact that the tubercular bacilli are found in the blood-stream, and it is highly probable that their presence there is much more numerous than is at present realized. The most full-blooded races seem most prone to contract the disease and to exhibit it in the severest forms, while cold-blooded animals are practically immune. An abundant supply of oxygen, as we know, favors the development of the bacillus, which is an anærobe.

Now it is held by almost all authorities on the subject that the tubercular bacilli enter the body mostly through the alimentary tract rather than through the respiratory. This being true, they must necessarily enter the circulatory system before reaching the lungs. In view of the fact that the right lung is the first to be attacked, and as it is the most abundantly supplied with arterial blood, it would seem not unreasonable to conclude that the bacilli thrive best where there is the best blood supply, being, in fact, purely parasitic and needing an abundant supply of oxygen.

Nature is a wise physician, and is not infrequently capable of vanquishing tuberculosis without outside help at all. The most effectual means at her command is in the phagocytes, who recognize an invasion of their territory by an enemy, and promptly put up a valiant fight which, if not overwhelmed by numbers, will end in victory for the individual. Even the dead phagocytes make an effort to keep up the combat by forming a barricade around the invading bacilli and thus preventing them from migrating further.

When, however, the bacilli have become established in the lungs, Nature seems to employ another method of getting rid of them, namely, by inducing a hemorrhage, thereby (may we not fairly reason?) removing the oxygen-laden corpuscles on which the bacilli thrive.

The theory therefore suggests itself to the writer that a rational therapy in this disease might consist in removing sufficient oxygen from the circulation to materially weaken the bacilli, and at the same time abstract several bacilli themselves from the arterial system, thereby giving the defensive forces an additional advantage, since in such conditions the phagocytes are usually congregated in the lymphatics or in the organs where the bacilli have their stronghold.

This might be accomplished by an in-

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duced hemorrhage from an artery, replacing the loss by an intravenous injection of normal salt solution.

The theory was suggested to the writer some time ago by his experience with a patient who related to him how that he (the patient) had several years previously lost his wife by tuberculosis. He himself had contracted the disease, and had suffered long and severely from night sweats and hemorrhages. One day, however, he met with an accident, nearly severing his foot from his leg with an ax. The bleeding was very profuse, and he lost a large quantity of blood; but in a short time after the occurrence all symptoms of tuberculosis left him, and he is today enjoying perfect health. Another circumstance which favors the theory is the fact that women who suffer from amenorrhea are much more prone to tuberculosis than those who menstruate freely and normally.

The benefits which seem to be derived from abstraction of blood in tuberculosis may, to be sure, have another explanation. Brunton has long ago pointed out that venesection, or arterial hemorrhage, is in reality a mode of serum treatment, since with every physiological repair of blood-loss the various ductless glands of the body pour out a new and fresh supply of their internal secretions which act as defensive sera. However this may be, it does not explain the affinity which the tubercular germs exhibit for the highly-oxygenated parts of the circulatory system. And in any case, the serum idea is not a contra-indication, but an added argument in favor of the therapeutic measure here suggested.

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### A CURE FOR OBESITY.

Dr. Albert Robin is one of the leading fashionable physicians in Paris at the present time; in fact, most pharmacists in the west-end of Paris would probably quote his name first. This fact gives some interest to a simple *régime* for obesity indicated by him, the details of which he gave to the Paris Academy of Medicine last week. Contrary to all treatments on the same subject, Dr. Robin allows his patients to both eat and drink as they please, provided they limit themselves to the *régime* he prescribes. The most important point in the cure of stout people, according to the eminent doctor's method, is that they should in the first place abstain from all drugs and medicines absolutely and entirely. Five meals more or less copious should be taken by the person seeking to lose weight, a special diet being indicated. A feature of the treatment is that a large cup of hot water should be taken with each meal, in the form of weak tea or water with a little peppermint.

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### THE DOCTOR.

Who stands with open arms to give,
A welcome in this world of light?
Who bids you breathe, who bids you live,
Who places you on garments white?
The Doctor.

Whom do you call when you are ill,
With measles, whooping cough or fever?
Who gives you then and there a pill,
And says the trouble's with the liver?
The Doctor.

When on the bed you toss in pain,
Through long, long night and weary days,
Who calls to comfort, to heal again,
And who deserves the highest praise?
The Doctor.

And when the sun sinks in the West,
Your race of life is lost or won,
Who did you need most in the past,
Who helped you o'er the stumbling stone?
The Doctor.

Who should you thank for all your wealth,
Your hoaded mines or banks of gold,
Who kept your nerve up, saved your health,
And cured you of the hardest cold?
The Doctor.

And when the last faint hope has fled,
When life is ebbing, almost gone,
Who keeps his place right by the bed,
Counts the pulsations one by one?
The Doctor.

And after your short life has past,
And you return again to earth,
What should we tell them if they ask,
Who must report your death and birth?
The Doctor.

—*Martha Bussert Hoyt.*

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# Hypodermic Remedies for Systemic Effects

By John Albert Burnett, M. D., Gans, Okla.

A MONTH or two ago we printed an editorial in this journal advocating a renaissance of the intra-venous mode of administering suitable remedies. Here is an able and enthusiastic plea for the more frequent use of the hypodermic method. Whatever may be our various opinions as to the desirability of hypodermic medication, the article by Dr. Burnett is at all events a timely one, since it may be said that the hypodermic route is just now falling into considerable disfavor and disuse—whether justly or unjustly, we leave our readers to judge after reading Dr. Burnett's brief. No doubt the author would be glad to hear from readers touching their views and experiences in this matter.

The subject of the hypodermic use of remedies for systemic effect is a very important and interesting one. It is not necessary for me to waste time and space in enumerating the various advantages that the hypodermic use of remedies have over all other methods with some drugs in many diseased conditions when quick or positive systemic effect is desired, or must be had.

The value of the hypodermic use of veratrum in eclampsia is very well known and gives satisfactory temporary effect if used free enough—to effect the dose and frequency of repetition being regulated according to the pulse. I will quote as follows from Potter's Materia Medica and Therapeutics, 10th Ed.: "Hypodermic injections of sodium phosphate have been used with highly beneficial results in syomgomyelitis and in unilateral astasia—abasia. Drs. Arocq and Luton of Rheims, advocate the hypodermic use of this salt as a substitute for the organic extracts and maintain that it is equally efficient in all cases in which these extracts have proved to be of value."

It is stated that the hypodermic use of magnesium sulphate in doses to not exceed five grains, well diluted produces the same cathartic effect, as an enormous dose by stomach. The hypodermic use of apocodeine hydrochloride will act as a purgative. This remedy is very often used hypodermically for purgative effect in veterinary practice.

The hypodermic use of epinephrin for systemic effect in asthma and various other condition is of such great importance that this remedy should be carried at all times by all general practitioners.

There is an interesting article on "Treatment of Secondary Anemia of Tuberculosis with Hypodermics of Iron", by Dr. Leroy, S. Peters, Oct. 10, 1908, *Medical Record,* in which he says "The hypodermic injection of medicine is fast gaining ground and bids to be by far the most sensible, if not the most perfect way of administering drugs in future." Dr. Peters claims it takes three months to get results from the internal use of iron in these cases and that results can be obtained in twenty days by the hypodermic method.

In his opinion the citrate of iron is the one best suited for anemic cases. He gives the injection in the gluteal region. There is a table in his article giving the hemoglobin on admission and after a certain number of injections. One case increased from 7.946 to 13.015 after thirty injections.

In an article "Camphor in Large Doses in Pneumonia," by Dr. L. Weber, *Medical Record,* Jan. 28, 1911, he reports injecting two hypodermic syringe fulls of a 20 per cent solution of camphor in oil of sweet almonds every two hours in the outer circumference of the thighs, until eight had been given each day, which was about 30 grains of camphor a day

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in a case of pneumonia which recovered but no doubt would have died if it had not been used. In an article "Camphor and Pneumococci," *Muench Med. Woch.* No. 36, 1909, by Dr. August Seibert, of New York, is 10cc of a 20 per cent camphorated oil to every 100 pounds of body weight are injected hypodermically every 12 hours, as soon after the initial pneumonic chill as possible. In cases of bilateral pneumonia and severe toxaemia these injections repeated every 6 to 8 hours. The camphor destroys the vitality of the pneumococci in the blood currant. Smaller doses have no effect."

Sea water has been used by subcutaneous injection in the treatment of eczema (December, 1910, *Medical Review of Reviews*). In infants the average dose is 20cc for a baby weighing 8 kilos, in adults, 150cc for a person weighing 60 kilos.

Cacodylate of sodium is used hypodermically in the treatment of anemia, malarial, cachexia, syphilis, neurasthenia, psoriasis, etc. It is a toxic agent and some patients do not tolerate its action very well, hence should be used with care. Arsenite of iron is used hypodermically for its iron and arsenic effect in the treatment of dry scaly forms of cutaneous diseases, especially in anemic subjects, anemia of chronic diarrhœa, anemia of malarial intoxication, chlorosis, etc. The hypodermic use of quinine and urea hydrochloride is of great value in malarial fevers, and its use should be better known by those that practice in the malarial belts.

It is not necessary for me to give the hypodermic uses of morphine as this is very well known and is very important in many cases. All physicians should carry apomorphine hydrochloride at all times as it is an emergency remedy, and our best and quickest emetic by hypodermic use, as well as a good general relaxant in most all spasmodic conditions. Its hypodermic use deserves a trial in eclampsia and in convulsions of various kinds. On page 651, December, 1910, *Medical Review of Reviews*, is a note on "Sacutaneous Injection of Oxygen in Cases of Asphyxia." It states that Raymond obtained excellent results with injections of oxygen in the crises of asthma, heart failure, uremia, bronchopneumonia and lobar pneumonia. It is necessary to give the patient enough to carry them over the crisis. The writer stated: "The technique of the injection is simply after disinfecting the skin, a hypodermic needle is inserted into the subcutaneous cellular tissue, care being taken to avoid veins. To the head of the needle is attached the tube of an oxygen tank. The oxygen is filtered through cotton and is gently injected under the skin by compressing the bulb attached to the tube. One liter and a half of oxygen is thus injected, forming a large subcutaneous swelling, which is rapidly and completely absorbed without leaving any emphysemia. The injection is repeated several times daily if necessary. The process is not disagreeable to the patient and gives such rapid relief that the patient clamors for its repetition."

Sodium salicylate has been used hypodermically with good results in rheumatism. The technique of its use is a little lengthy and should be known before using it, and for those interested, I will refer them to "Hypodermic Injections of Salicylates in Rheumatism," by Dr. August Seibert, *Medical Record*, March 11, 1911.

Ether has been employed hypodermically for systemic effect which is very fleeting and also for its local effect, as in sciatica. Hypodermic injections of ether are painful, and the suffering persistent, hence should not be used only in an emergency when no better remedy is at hand. It is not my intention to mention all drugs that can be used hypodermically for systemic effect, and give their uses, for it would require a volume of good size to do this.

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I have not even mentioned the hypodermic uses of many remedies that are used daily as strychnine, atropine, pilocorpine, etc.

The object of this article is intended to stimulate investigation and make this method of using drugs more popular, as it is an extremely important way of using many remedies in many conditions that will give the desired results when it could not be obtained in no other way. It should be remembered that all drugs do not have the exact same action, when used hypodermically, as when used by mouth for instance, lobelia has no emetic effect when used hypodermically in large doses. Irritating and painful hypodermic drugs should be avoided as much as possible.

If a needle is used more than once it should be thoroughly disinfected each time after using, and just before using it. The disinfecting of the needle if used more than once is the most important aseptic precaution in the entire technique of giving a hypodermic injection. Disinfecting the skin is important, as well as disinfecting the syringe and using a pure solution. Ordinarly one application of iodine is all that is sufficient to distilled the skin, or other remedies can be used if desired. The application of an ethyl chloride spray over the part where the injection is to be given is important with some patients, especially to sensative patients, children and many that are not accustomed to hypodermics. It is often necessary to seal the puncture of the needle with collodion. I notice any alcoholic solution is bad, to run out where the needle entered, however, we do not often use an alcoholic solution.

Many patients have died when the indicated remedy was given my mouth, and not absorbed by the stomach, being deranged that could have been saved if it had been given hypodermically, and far better results could be obtained in many cases by hypodermic medication.

## GALVANISM IN BRAIN TROUBLES.

Galvanic electrification should exercise an important influence on the circulation and nutrition of the brain. Ermentrant has obtained good results from this medality in the treatment of hysteria, and hysterical headache. The technique is to apply a flexible pad electrode to the nape of the neck, high up, and the other electrode, a large one, moved about from part to part, taking care not to raisse it from close contact with the skin, unless the current strength has been previously tested. This treatment has a good effect on the troubles higher up, in the brain.

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**Rheumatic Endocarditis.—**

Yeo advises that while the acute febrile state continues two tablespoonfuls every two hours of the following mixture be given:

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| Quin. Sulph. | gr. xxiv. |
| Ac. Citrici | dr. iij |
| Tinct. Limonis | dr. j |
| Aquæ q. s. | oz. xij |

with two tablespoonfuls of the following:

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|---|---|
| Salicini | dr. j |
| Potass. Bicarb. | dr. iv |
| Sodii Carb. | dr. ij |
| Aquæ q. s. | oz. xij |

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**Bronchitic Emphysema.—**

The following will be found a useful formula for cases of emphysema complicating chronic bronchitis:

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| Ammon. Carb. | gr. xl |
| Tinct. Nuc. Vom. | m. xx |
| Tinct. Scillæ | oz. j |
| Infus. Serpen. q. s. | oz. viij |

Two tablespoonfuls for a dose. Digitalis should be added when the right heart is dilated.

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**Gastric Cancer.—**

To relieve the pain and produce deodorization in these cases, the following mixture of opium and creosote will be found very effective:

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| Opii Extracti | gr. iij |
| Creosoti | m. iij |
| Pulveris Saponi q. s. | |

To be divided into twelve pills. One every hour to relieve pain and distress.

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# CURRENT MEDICAL LITERATURE.

## RETRACTING THE ANTERIOR FAUCIAL PILLAR.

CIRO CALDERA, of Turin, Italy, in a communication to *The Lancet*, remarks that the numerous observations about the alarming hæmorrhages that follow the removal of the tonsils with the guillotine have contributed to extend the practice of morcellement of the tonsil with suitable forceps. This method is very easy to execute, it being possible to avoid bleeding and pain with the new chemical substances for local anæsthesia. The forceps used for "morcellement" exercise not only a cutting, but also a crushing action, which reduces and hinders hemorrhage. In order to simplify the grasping of the tonsil a hook is often used, with which the faucial pillar covering its anterior surface is retracted. With the instrument usually used the faucial pillar is drawn out, but the assistant's hand masks the operation and limits the free movements of the surgeon. The writer has introduced with the best results a new type of hook. The handle is 9 centimetres in length, the shaft 10 centimetres, and the hook 1 centimetre. The end of the instrument is rounded, so as not to damage the mucous membrane. The two portions of the shaft form an angle of 80°. By the use of this instrument the assistant's hand does not obstruct the surgeon. Moreover, the angular disposition of the hook and handle allows only a moderate lateral traction to be put upon the anterior faucial pillar, from behind which the hook does not easily slip.

## THE TEST TUBE AND THE STOMACH.

Test-Tube Observations have their uses, even in physiological chemistry. But it must often have occurred to thinking pharmacists that what takes place in the test-tube in physiological research is not necessarily a demonstration of the workings going on in that part of the human laboratory known as the stomach. A medical man, writing to the *Chemist and Druggist of Australasia* with reference to recent statements about the action of bismuth and alkalies in inhibiting the proteolytic value of pepsin, says that "while it is true that the stomach is a laboratory, it is not true that it is a chemical laboratory. From that fallacy has sprung more ridiculous therapeutics than almost any other fad of the last fifty years. When the chemist started to construct formulæ for therapeutic use, the market was soon flooded with all sorts of preparations beautiful in theory, but lamentably useless in practice. With regard to the particular case of pepsin, it may be true that in the laboratory it does not digest albumen when combined with alkali or bismuth, but it is also a fact verified beyond all doubt that the combination induces digestion of food where one or the other alone absolutely fails." Continuing, the writer says, "Certain it is from my own experience that in the case of central vomiting the food returned undigested when pepsin and acid was given, whereas a test meal with pepsin and bicarbonate of soda was digested. * * * I am convinced that the best way to peptonise food outside of the body is the laboratory way, and the best way to digest it when in the stomach is in association with an alkali or bismuth. * * * It is possible that the alkali becomes incorporated into a true vital-chemical substance which accentuates its energy in a therapeutic sense, though this seems contrary to the clinical facts. I have prescribed in one case for some time bismuth with very little result, but when pepsin was added as a separate medicine the result was immediate."

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### POTASSIUM PERMANGANATE IN AMENORRHEA.

An interesting article in the *Practitioner* describes the use of potassium permanganate in the amenorrhea of young women. It is stated that it may restore menstruation after the lapse of two years or longer; sometimes it may restore the discharge within a few days or the immediately succeeding period being missed the one next may appear in due course or it may take six weeks or even two months before the drug succeeds. This salt is useful also in cases of scanty, and, perhaps, delayed, menstrual flux, the interval varying from six weeks to two months. The permanganate in a case such as this brings on the period at its proper time, together with an increase in the flow. It is useful, also, when a chill prevents or delays the menstrual flow; thus, in the case of a woman who had prevented menstruation by taking a cold bath on the day when it should have appeared, the usual symptoms arising from arrest of the catamenia made their appearance: three doses of the permanganate having restored the flux, she discontinued the drug, whereupon the discharge ceased. She again returned to the medicine, and after another three doses the flow reappeared and progressed naturally. Potassium permanganate may be given daily until the catamenia appear and complete their course, when the salt should be discontinued; it should be recommenced four days before the access of the next period, and continued till the flow ceases. It is useful in girls who, on leaving the country and coming to town, suffer from arrested menstruation; also in the amenorrhea induced by sea sickness and in the case of women, between 30 and 40, generally married, who while rapidly increasing in weight suffer from a diminished menstruation. Potassium permanganate is given up to one, two or more grains in pill-form thrice daily after meals. Make the pills according to the following formula: Potassium permanganate, grn. 1; kaolin and petroleum cerate, in equal parts, q.s. Certain observers deny that the permanganate produces abortion, but some cases of abortion apparently due to the drug have been noted.

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### THE PITUITARY GLAND.

Wiggers, in the *American Journal of the Medical Science,* asks the question:

Nature of the Internal Secretion. Has the internal secretion been determined? What is its nature? Is it a single substance or does the gland secrete a number of substances? Answers to these and similar questions have been sought by studying the effects of injections of its extracts on the muscular and nervous functions, on nutrition and development, on the secretion and composition of urine, on the flow of the digestive juices, and on the cardiovascular system, this latter supplying the most productive field for research.

Experimentation has shown that by water, glycerine, or salt solutions, a substance may be extracted from either fresh or dried glands which resist boiling, and, when introduced intravenously or intraperitoneally, causes polyuria, slow or accelerated pulse, accelerated respiration, dyspnœa and motor disturbances, such as ataxia and paralysis of the hind legs, symptoms, it will be noted, which are also characteristic of the removal of the gland. This substance is obtained only from the posterior lobe, however. The extracts thus far obtained from the anterior lobe are apparently inert even when injected in enormous doses.[27] This fact seems very peculiar since it is the anterior lobe which is composed of glandular tissue and which would, therefore, be expected to furnish the physiologically active principle, and the paradox becomes still more interesting when we consider that it is this portion alone which is of vital importance.

The fact may receive several interpretations. We may imagine that the active

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substance is secreted by the anterior lobe in an inactive form and that it becomes activated or chemically altered in some manner as yet not understood after reaching the posterior or neurogliar portion. Schafer[28] apparently leans toward such a view. This hypothesis, nevertheless, requires a brave assumption, since, first, no proof exists that neurogliar tissue possesses such an activating or formative power; and, secondly, there is no evidence that the anterior lobe passes its secretion into the posterior lobe—in fact, histological evidence appears opposed to it. For this reason, it seems to me, we are not justified in assuming that the substance extracted from the posterior lobe is identical either in composition or action with that of the anterior lobe. Until further evidence is forthcoming, the author prefers to believe that this lobe elaborates a secretion as yet unknown, which affects nutrition and is necessary to life, and that the posterior lobe either forms an additional secretion not of vital importance, or contains chemical substances which, though not normally secreted into the blood, when extracted and introduced, affect the body functions.

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## TREATMENT OF BURNS.

Steele, in the *Railway Surgeon,* warns that if the burn is extensive, toxic applications may add markedly to the seriousness of the condition. For emergency, a solution of boric acid, or aluminum acetate answers well, until an attempt at permanent dressing is made. Should neither be readily obtained, soda bicarbonate may well be used. This care is such as to readily allow the changing to the seemingly ideal care to be spoken of later. Should a wet dressing be determined upon, and much denuded surface exists, the pain occasioned by the process, unless the dressings are frequently changed, will probably sooner or later result in some oleaginous selection. Of these, only one or two will be mentioned—aseptic carron oil, or zinc stearate, dusted freely upon the parts and covered with simple petrolatum upon guaze has served me well.

The aqueous solution of value is picric acid, 2 to 3 per cent, or aluminum acetate, 0.5 to 1 per cent, or boric acid saturated. Of the wet dressing treatment, there is detailed by Dr. Fancher, of Chattanooga, Tenn., in the *Journal of the American Medical Association,* July 2, 1910, a method highly commendable. He advises first, after caring for shock and pain, placing the parts in a cool bath, 50 to 60°, with a tablespoonful of salt or sodium bicarbonate to the gallon, until anodynes have relieved the pain.

And where large surfaces are involved, and conditions are favorable, he would continue the bath for several days. Then removing displaced portions of skin, leaving the blisters, the surfaces are sprayed or mopped, with peroxide of hydrogen, dried with gauze wet with a solution of picric acid. Formula: Picric acid, ʒj; alcohol, ℥ij, and water, oiss. This is covered with a thin layer of cotton, held by adhesive straps or a bandage, and allowed to remain until soiled. Then they are removed, the peroxide cleaning repeated, and then reapplied as before. Blisters are opened after three days. Open surfaces are covered with gutta-percha tissue, first mopping the surfaces with picric acid solution, then dressing as before. He has never had poisoning from this dressing. Its germicidal properties prevent infection, and its astringency lessens serous exudate.

In reviewing the various methods of treatment presented to the profession, the dry dressings, as advocated by Dr. Haldor Sneve, some five years since, promises results not secured by any other. The cases reported by him indicate possibilities which seem to be beyond comparison with those secured by any other method. It was published in the *Journal of the American Medical*

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*Association,* July, 1905. It should be at our command whenever occasion arises for its use. Without studiously following the technique as detailed by Dr. Sneve, success in severe burns will be rarely attained.

His technique is as follows: After providing for pain and shock, the surfaces are sponged with warm, normal salt solution, dried with sterile gauze, and dusted with stearate of zinc, no other dressing being applied. The patient is placed so as to expose the wounds to the air, in whatever position may be necessary. As the exudate drips, it is dried and the stearate again applied. This is done continuously, until crusts form over the parts. Should pus appear under any portion the crust is removed, the surface again cleaned by saline solution, dried and dusted as before with stearate of zinc. It will be apparent that the infection is never long imprisoned, hence, its danger greatly minimized, and the drain of serum and pus is the minimum; that repeated shocks from painful dressings are nearly eliminated, and recovery vastly more rapid. Healing, under early formed crusts, is always attended by far less vicatrical deformity, and functional results are consequently the best.

It is suggested also that such surfaces be exposed to the sunlight, for hours daily, when weather will permit, always mornings, even in hot weather, can this be done, and again later in the day.

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## TUBERCULOUS CERVICAL GLANDS.

Anna D. Varner, in the *Hahnemann Monthly,* says the Bier treatment is very satisfactory in these cases. The elastic neck-band can be worn four or five hours out of every six. Black elastic rubber bands, with a button in one end, and holes in the other, are used. It should not be tight enough to cause the child any discomfort. When fluctuation appears in the gland, a small incision is made and the pus evacuated. A few hours later the suction cup is applied. This is used daily for a half to three-fourths of an hour, six minutes on and three minutes off. The bandage, of course, has been removed. No packings or injections are necessary. The cup should be large enough to enclose the whole diseased area. The suction is made by the rubber bulb attachment. Children will be interested in using this appartus themselves. In all forms of glandular suppuration it promotes absorption more rapidly than any other method.

The author sounds a warning against massage or manipulation of any kind in glandular or any other form of tuberculosis. Rest is the great keynote in the treatment of this disease. Rest of the patient in bed when the disease is general and active; rest of a joint or localized focus, by cast or splint or strap. We admit that a free and active circulation of the lymph in all parts of the body will prevent germs from gaining a foothold and perfect circulation of blood and lymph will hasten its elimination, but when the disease has progressed far enough to produce a mass of nodes in the neck or mesentery, to stiffen and produce tender spots along the spine from the swelling of the retroperitoneal glands, no amount of manipulating or readjusting of slipped ribs or dislocated vertebræ can eliminate it from the system. Nature itself teaches us better, for when the bacilli enter and lodge in the body, the leucocytes proceed in battle array against them, wall them in and hold them there at *rest,* and we know now that to increase the leucocytosis even by forcing blood into a localized area and slowing the circulation so that the leucocytes may do their duty, is the only way to make any headway upon the disease. Were this not so the race would have been exterminated by tuberculosis.

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# THE DOCTOR HIMSELF.

## DOCTORS AND ADVERTISING.

COMMENTING on the action of the Blair County Medical Society in deprecating the use of the names of physicians in connection with operations, accidents, etc., the Johnstown Tribune says:

Physicians, of course, have a perfect right to decide upon their own code of ethics, but we have never been able to see any good reason for the ban they have placed upon legitimate advertising. Against a certain sort of medical advertising they have a right to protest, and they ought to fight it more vigorously than they do. We refer to dishonest and misleading medical advertising. But we are opposed to it not because it is medical advertising, but because it is dishonest, just as we are opposed to any other dishonest advertising. We have never seen how there could be anything that tended to lower a doctor's professional standing in fairly and decently calling attention to the business at which he makes his living, any more than there is in a dry goods merchant doing the same thing. Particularly the physician who has specialized and through a long term of study prepared himself for handling a particular line of ailments, ought to be permitted to let the public know of that special preparation without trusting to luck and the good offices of his fellow-physicians, not always entirely free of jealousy. Probably the chief argument against physicians' advertising is that it is resorted to by "quacks," but that does not furnish any better reason than the honest and reliable merchant would have if he refused to advertise because fakirs do so. Perhaps a more real reason for the non-advertising of physicians is that the ethics of the profession are generally determined by the older members, those who are usually well established and do not need it, and who also may sometimes possibly fear the inroads that might be made if the younger members were to present their claims to patronage through the press.

It is interesting, at least, and ought to be instructive to get, once in a while, the popular viewpoint of some of the ethical problems that concern the profession. It is to be feared we do not sufficiently take counsel with the public in such matters. Quite likely we should find a good deal of common sense injected into our councils by such a course.

## THE BELOVED PHYSICIAN.

The practice of medicine, said Howe, as far back as 1868, calls for the highest and best qualities in men. Its varied and arduous labors test the physical stamina of the strongest; its delicate and sacred trusts demand a refined and faultless moral culture; its general duties can not be performed well without education, genial manners, engaging and enlivening conversational powers, barring levity or insincerity. Such qualities are not found in a man with a beastly countenance, for they invariably imprint upon the features of the possessor a spiritual and intellectual expression, which no base impostor can assume at will.

The good and beloved physician carries hope and comfort to the hearts of the sick and suffering. He breaks sad news with such discretion and regard for the feelings of the near and dear that the weight of the blow falls less heavily. His step is so gentle and his words so musical that they charm the ears of the helpless. His hand is soothing as a woman's, yea, his heart is that of a lion. His ways are so peculiarly winning that the little child instinctively sees in him a friend. He has a cheerful word for everyone—is fond of pleasantry, though he never descends to a

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rude joke. His life being spent in doing good, he becomes so devoted to the welfare of his friends that he does not feel like absenting himself for pleasure or recreation. There are fish in the streams and birds in the covers, but he can not leave his duties to bag them.

His declining years are as sunny as the days of boyhood, and his final departure is mourned by all except the young upstart, who has been impatiently waiting for the coveted patronage. He leaves with a smiling trust in the mysterious ways of Providence, though his sectarian friends cannot tell of what branch of the church he pinned his faith. All his life he has been impartial in ministering to the spiritual comfort of the dying man. In his younger days he had been a little given to materialistic reasonings, but as the shadows lengthened in the evening of his earthly existence he saw more clearly the will of the Master, and more firmly believed in a happy immortality. As is written expressly for him, he had cherished and oft repeated that beautiful Arabic injunction:

"So live, that sinking in thy last long sleep,
Thou alone may'st smile whilst all around thee weep."

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## ARE DOCTORS UNPOPULAR?

This is another question propounded and answered from the public side by a writer in the *Chemist and Druggist,* of England. If doctors are unpopular, he says, the reason probably is, not that they are incompetent, for some of the most incompetent practitioners I have known have been only too popular, but that they give themselves airs of superiority and are somewhat overbearing in their attitude towards the laity. In former times there certainly was a widespread distrust of doctors, lawyers, and parsons, which was largely due to the suspicion of the vulgar that anybody better educated than themselves was likely to get the better of them in practical matters. The case of Mr. Tulliver, who desired education for his son in order that he might be able, like Lawyer Wakem, to "wrap up his meaning in words as isn't actionable," may be advanced as an instance, though an imaginary one; but indeed I have heard scores of uneducated people speak in the same sense. That education should be valued for its own sake has even yet hardly occurred to the Englishman of the lower classes, and Mr. Tulliver still has representatives among us; but this alone will not account for the unpopularity of any particular profession. In small minds, however, the consciousness of superior learning is apt to beget a feeling of personal superiority, and it would appear that the study of science has this result more frequently than the "humanities"; certainly doctors often—I think increasingly often—do show an arrogance, at least towards all who can be supposed to question their claim to a monopoly of medical knowledge or skill, which does not make for popularity. We have recently had glaring proof of this; indeed, we have it every day. I fancy the general public more often resent this attitude than doctors are aware of, and are beginning to foresee the possibility of a scientific despotism compared with which the old theological despotism was mild.

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## OBSTETRICAL FEES.

Michael Casper, M. D., in the *New England Medical Journal:*

Most all physicians are agreed that the fees in obstretrical cases are entirely inadequate; compared to the fees in other cases of practice these fees are ridiculously small.

The fee for attending obstetrical cases has not increased in years, though if done well and scientifically is far more difficult than formerly. In the first place, families are smaller now, formerly it was not a hard matter to find families of six or seven children, but now one or two children make up the majority of families.

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We are all aware of how much more tedious and more difficult it is to handle the primipara than the second or subsequent confinements; they take much longer and being entirely ignorant of such things as well as anxious and often alarmed are more exacting of the accoucher Obstetrical cases must be given precedent over all others, even over our own health by breaking our rest at all and untimely hours of night, also causes us to lose other calls as well as miss our office hours and appointments. The responsibility is also greater now than formerly, nor is there a class of practice in which a physician is more subjected to criticism and even violent slander and loss of prestige than obstetrical practice.

We can all call to mind many instances where some physician has suffered unjustly in loss of practice or otherwise from some unavoidable complication, such as puerperal sepsis, lacerations and many other complications to mother as well as to baby.

To a case of obstetrics well and scientifically cared for, he is of incalcuable value to husband and father later on, especially if attendant restores wife to her normal standard, free from the many complications and sequelae that are wont to follow in the trail of pregnancy and confinement.

Now what do we get for all this? Fifteen dollars is the rule, it seems. Many get only $10, and not a few receive no compensation whatever. No one will vouchsafe but what this state of affairs, that so vitally concerns the great majority of the profession, should be remedied, but what can we do? Or rather what will we do? There is no other class of men but would have remedied such a defect in their welfare.

How long would a trades-unionist stand for it? It may be said in answer that we are a profession and above such comparisons. That is why we are poor and why we remain so.

Why should the doctors stand still when all around them are getting more out of their daily efforts? Certainly we must live, and food stuffs have trebled in value and we require quite as much as formerly.

Our families also are just as worthy of a high station as anybody else, and these big fashion lady hats and every other item that the doctor must constantly buy have increased in value. In other words, his dollars are coming in certainly not any faster than formerly, and they will not go near so far.

Formerly oil lamps at fifteen cents a month sufficed, but now electric lights must light up the offices of the progressive physician. He requires an automobile, too, and many other expensive requisites, yet he only gets $15 for a case of obstetrics, for being up all night, and making four or five after calls, besides having already made several urinalyses and lost time in many other ways. And this when all goes well—but how often do we have simple, uncomplicated cases? All experienced men have been through the mill and need no rehearsal of experiences, but why don't we act?

Some say, "Well, a midwife will do it for $5 or $10 if I don't." Let them, they have no reputation to lose and time to burn. "But Dr. Ketchum will if I don't." Ah, here is a real stumbling block. We all are fully aware of the fact that the profession unfortunately contains a good few of this class, and that is the reason that we should act together. Until such a time as we may be able to get together on matters of fees and other vital business connected with our profession, the following plan is offered as a partial solution to the question.

We must first change the whole basis of charges in obstetrical cases. It is wrong to take a labor case at a fixed charge, and that charge too low in the beginning. We would scarcely take a case of pneumonia or other disease at $15, yet he may get well or die in a

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week. I dare say the doctor would not be censured either, for all consider pneumonia a serious and dangerous disease and confinement as a harmless affair free from danger, rather like a tea party where if anything goes wrong it is the doctor's fault. A doctor that does much obstetrical work scarcely ever finds a time when he is not under obligations to stay in the city, either looking after after- treatment or expecting some case, a responsibility that cannot be estimated.

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### "DONT'S" FOR DOCTORS.

The *Physicians' Business Journal* offers the following practical advice to physicians:

Don't be slow in your attention to your patients!

Don't spend too much time with your patients. Get your case history, make your diagnosis and institute treatment, and leave, if on a call, or invite in your next patient, if in the office.

Don't visit with your patients when calling on them in a professional way, as you may innocently drop some remark which may mean a loss to you in the future.

Don't make your office the resort for all of the town loafers, either during or after office hours.

Don't tell your wife all about your cases, as she may not understand all the particulars and may tell the neighbors things which will act to embarrass you.

Don't treat patients on the street or in public places.

Don't tell your patients what medicines you are giving, as the effect is all that they need know anything about.

Don't make the saloon your loafing place, for if you do not imbibe you may be accused of so doing if you hang about such places.

Don't try to be too dignified, as false dignity is worse than none.

Don't antagonize the children. They are the doctor's best friends.

Don't do anything which any other decent man would not do any you will meet with success.

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### DE SENECTUTE.

Andrew Jackson Howe, in the *Eclectic Medical Journal,* 1890.

It is not becoming to regret the departure of what may be supplanted by something better. Does the boy lament the loss of his infancy, or does the young man regret that he is no longer a youth? And it might be asked with equal propriety if the well settled adult longs for the uncertainties of young manhood? And, finally, is there need for repine on the part of the elderly who enjoy intellectual repasts, as well as a satiety of physical feasts?

"Maturer life with smiling eye will view
The imperfect scenes which youthful
fancy drew."

When Sophocles was asked if he had enjoyed carnal pleasures, he calmly replied: "The gods have given me something better; nay, I have run away from them with gladness, as from a wild and furious tyrant."

There is such a large proportion of suicides among adults that the circumstance is taken as an argument favoring the idea that existence beyond youth is hardly worth continuance. But in this we are not to be misled. An ambitious man may become despondent as soon as his schemes fail, and his future appears dark and uncertain. He has not wisely estimated the world, but has entertained a more hopeful outcome to it than facts warrant. The husbandman who mortgages his crop in seed-time is not sure of a harvest—he would be wiser to wait till the danger of frost and midge are over and the golden grain is ready for the sickle. Impatience and unreasonable expectations are among the faults of youth, and lead to untimely unhappiness.

Age does not alone ensure comfort and repose, nor is advanced life a surety; yet once attained, and the environment

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be fortunate, who would exchange its substantial worth for the uncertainties of youth? The young are chasing a phantom, the substance ever evading their clutch; the elderly, with the assurance of support, and the possession of mental wealth, are better off than the frivolous young, and infinitely happier. This the young can not appreciate till they pass the meridian of life, and begin to descend the gentle slope, going slow that there may be opportunity to admire the ever lengthening shadow—till the twilight tints the horizon—till it would be hard to tell when the day doth end and the night begins.

A mind schooled in cultured ways never has time hanging heavy, as if it were a burden; but the wit, wisdom, and worth of the great masters in art and literature become enchanting studies, widening comprehension, and enriching appreciation. To grow old under such influences is not a burden or yoke hard to bear, but to glide along an eddying pool after cascades have been shot, and turbulent waters are calming to mingle with the sea.

Let noisy youth enjoy its huzzas, and the adolescent dream of bliss, almost within reach, and the stalwart adult just entering the race of real life strive for prizes with an eagerness that challenges admiration, yet only the elderly live to enjoy the best of life's struggle. Then "grow old," the better is to come! The first enjoyed was only good that the last might be the best!

Old age is a misnomer—there is no end of time. The babe that died today was comparatively old—its term of life expired; the lad is young in years, yet may be sporting on the brink of the grave. The smiling, winsome, waltzing maiden is shocked at the wringled image of age, yet may be nearer the tomb than her grand parents. The man of sturdy form and iron will may hurl defiance at any foe but death standing near; the aged alone are calm and not afraid—they have seen all except the unseen and cheerfully await the inevitable.

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## MEDICAL PROFESSION AS A BUSINESS CAREER.

The *Lancet-Clinic* refers to the oft-repeated question why physicians are unable to follow other lines of business, so-called side-lines, and be a success in these, and yet suffer no diminution in their ability to diagnose and treat disease conditions. Surprise has been expressed that medical men cannot successfully enter business, and still continue the practice of their profession on the same high plane as before. The general result of attempting to follow profitable "side-lines" has been, with few exceptions, such signal failure that the surprise of the public is perhaps pardonable. Business men take positions in the board of directors of large and influential corporations, they often own two or three flourishing business concerns, each of which, with competent assistance, is managed easily. But the medical man who strays outside the fold of his exacting profession to increase his income or find a vent for superfluous energy in a business venture usually fails. The cause, after all, is obvious. As the editor of the *Medical World* reminds his readers, the successful physician must *think* in medicine. He must be permeated with medical thought, his ideas must have a medical tinge or flavor, he must in a sense live in medicine, breathe in a medical atmosphere, his every action must be governed by the jealous mistress to whom he has consecrated his career. Medicine exacts the most complete submission. She will have no other goddess to share her place. She consents grudgingly to incursions in allied fields of endeavor, biology, sociology, the classics, literature; but these must always be secondary to the predominating interest. Dividing the attention due to medicine, and bestowing time and energy on foreign interests invariably brings with it its penalty.

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# REFRACTION.

### GENERAL EFFECTS OF EYESTRAIN.

JAMES HINSHELWOOD, in *The Lancet,* admonishes that whilst eye-strain often manifests itself by pain or discomfort in the eye itself, this is not always the case. In many cases the eye-strain is accompanied by no pain or discomfort in the eye, but by symptoms altogether outside of the eye itself, and these are the cases which often escape the notice of the practitioner unless his attention has been specially directed to the subject. It will be well for him, therefore, to thoroughly familiarize himself with these symptoms of eye-strain, which arise apart from the eye itself, and this knowledge will often be of the greatest service in ministering to the well-being of the patients under his charge.

Another most important thing for the practitioner to bear in mind is that the symptoms arising from eye-strain may be due to a very small error of refraction, and hence may never be suspected either by the physician or by the patient. This is peculiarly true of astigmatism, where a very small error, even 0.25 D., may give rise to distressing symptoms. In fact, my experience is that the small amounts of astigmatism give rise to symptoms of discomfort more frequently than the high degrees. The explanation is that a person with a high degree of astigmatism makes no effort to see better, as his vision is so defective, but that the smaller degrees of astigmatism, only causing a slight blurring, induce the patient to make a continuous accommodative effort to counteract it and get clear images, and hence cause continuous ciliary strain. These patients with slight degrees of astigmatism have good vision, and many of them pride themselves on their good vision, and are rather indignant at the idea of their symptoms being due to eye-strain. Patients with hypermetropia and suffering severely from eye-strain may have absolutely normal vision if tested by the test types, and it is this fact which completely misleads frequently both the patient and physician as to the true cause of their symptoms.

Another reason why eye-strain, as a cause of symptoms, is often overlooked is because the patient is already wearing glasses and has derived little or no benefit from them. It cannot be too strongly emphasized that to derive benefit the refractive error must be exactly and properly corrected. In most cases this cannot be satisfactorily accomplished without examination of the patient under homatropine or atropin. This can be properly done only by an ophthalmic surgeon, and nothing requires greater care than the fitting of patients with appropriate glasses. In many cases, as when there is marked inequality of refraction in the two eyes, the problem is a very difficult one and requires great care, thought, and experience.

Of all the reflex symptoms of eye-strain, the most frequent is headache, and yet very many cases of ocular headache go on suffering for years without the true cause being suspected. It is important to bear in mind the points with relation to eye-strain already mentioned —viz., that eye-strain may be present without the patient experiencing any discomfort or pain in the eyes; that eye-strain may be present although the patient possesses good and even normal vision as tested by the types; and that glasses will not give relief unless the refractive error has been adequately and exactly corrected. Bearing in mind these

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facts, it is evident that the only safe rule of practice is that every patient suffering from headache of a recurring or chronic character should have his refraction carefully examined by someone thoroughly competent to make such an examination.

The ocular headache may occupy any position—frontal, vertical, or occipital, and even at the back of the neck due to eye-strain. Whilst the situation of the headache does not guide us to a diagnosis, in the majority of cases it is frontal or vertical. Ocular headache is generally absent in the morning. If the patient has had a good night's sleep he wakens up free from headache. It begins in the course of the day and gradually increases in intensity as the day goes on. This is always the case with a pure ocular headache. This is in contrast to the character of the toxic headache, which is worst in the morning after a good night's sleep, and becomes better when the patient gets up and exerts himself. The toxic elements accumulate in the blood during sleep and exercise helps in their elimination. In many cases of headache we have a combination of the toxic and ocular, and in such cases the patient wakens with a headache, which, however, gets worse as the day goes on. In such cases the cure of the patient can only be accomplished by the relief of the eye-strain and the removal of the toxæmia, of which constipation is a frequent cause. Anæmia and eye-strain are also a frequent combination in the production of headache, and cure can only be brought about by the removal of eye-strain and the internal administration of drugs for the cure of the anæmia.

This complex origin of headaches is a point that is very frequently lost sight of, attention being given to one factor only in the case. It is to be remembered that whilst eye-strain is frequently the sole cause of headache, there are other cases where the eye-strain is only one factor in its production. The relief of the eye-strain will benefit the patient, but complete relief will not be given until all the causal factors have been dealt with and removed.

It is very remarkable how much the general health of the patient benefits by the removal of a chronic headache. Even if the headache has not been very intense, its frequent and often daily presence produces in the patient great mental depression, which through the influence of the nervous system has a powerful influence on the nutrition of the body as a whole. The complete removal of this headache, which has made the patient's life miserable, lifts him into a new world, and the general condition of the patient, both mental and physical, is enormously benefited thereby.

In addition to definite headache patients often complain of peculiar sensations in the head, which disappear on the relief of eye-strain and which are undoubtedly due to it. A feeling of pressure or tension in the head is the most common of the head sensations apart from pain. Less frequently patients complain of a feeling of tingling or crawling over certain areas of the head, and in some cases the patients could not venture to describe the sensation further than remarking that there was a very peculiar feeling in the head, always produced by the use of the eyes.

## WHEN THE GLASSES ARE WRONG.

Once in a while someone will come in for an examination who will show a pair of glasses which he has been wearing, and which are so different from what he ought to have, that it is self-apparent that a mistake has been made by someone. It is natural under the circumstances for the optometrist to think that some other optometrist, or possibly some oculist, has made a bad error, in which he may be right or wrong; probably the latter. There is a very strong likelihood that the examination in the first place was correct, but that the wearer of the

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glasses in having a broken lens replaced in a hurry has had the work done by someone who is not first class, or something else has happened entirely independent of the examiner of his eyes, which has resulted in a wrong lens being in his mounting. This is the position, anyway, that we should in such cases, and not jump to the conclusion that some other optometrist is incompetent. Of course, if the wearer of the glasses shows the prescription for the same, and prescription and glasses agree, and still there is a misfit, then the case is clear, but this rarely happens.

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## DOES PTERYGIUM CAUSE ASTIGMATISM?

George P. Hall, writing in the *Texas State Journal of Medicine*, October, believes that if the nature and method of the growth of a ptergium is examined into, it can readily be understood why it may produce astigmatism. The membrane, as a whole, is quite capable of making a smart traction on the cornea, quite enough to alter decidedly the relative length of the two principal meridians.

Dr. Hall relates the history of a case in which the astigmatism was markedly reduced following removal of the ptergium. The ophthalmometer showed the two principal meridians of the cornea to be about the same curvature, and coincident with this the left hyperphoria had also disappeared. He believes the facts in the case justify the conclusion, that the ptergium in its advance on the cornea changed a pre-existing astigmatism of .50 D. axis 15 degrees, to that of 1.50 D. axis 90 degrees, and that it also embrarrassed the vertically acting muscles so as to superinduce a left hyperphoria of 1 degree, which disappeared with the astigmatism on removal of the cause.

## ILL-FITTING FRAMES AND MOUNTINGS.

If we will glance at all the glasses of the people we meet, says the *Optical Journal-Review,* we will note that the number of ill-fitting frames or mountings is a very large percentage of the whole, though we must make some allowances, for there may be a few of the number that we see which are purposely made of the incorrect P. D. The average refractionist puts a great deal of stress on his getting the refractive error down to a hair's breadth, and yet he may be extremely careless when it comes to the frame or mounting. He may be pushing the sale of some mounting which from its very construction cannot be used on narrow faces where large lenses are used, and yet he may be so well pleased with the mechanical construction of such a mounting that he will pass by the importance of having the P. D. right. The purpose of the frame or mounting is to hold the lenses in the right position before the eyes and keep them there, and if a particular make of frame or mounting will not do this properly, then some other form should be used that will. Of course, we all know the hatchet-faced individual who wants jumbo lenses and won't have anything else. In such a case as this prisms should be ground into the lenses so as to bring the P. D. down to the right width.

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## AS IT GOES.

Dec. 15.—"Doctor, if you get me out of this I'll willingly give you all my earthly possessions."

Jan. 15.—"Mary, what do you think of that robber sending me a bill for $20 for ten visits?"—*Baltimore Sun.*

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Dr. M. Holliday of Austin, Tex., says, March 16, 1909: "Enclosed you will find money order for one of your Baird's Pessaries. I have one patient suffering from procidentia now wearing one of these pessaries with which she is delighted."

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# THE SICK ROOM.

## AMUSING CONVALESCENT CHILDREN.

A VERY interesting article by Iona Gratia Wilkins in the *Trained Nurse* gives some exceedingly practical suggestions as follows:

Dolls and their accessories always have a warm place in the hearts of little girls, and the suggestion of making a nurse dolly with a "really truly" cap usually meets with warm approval. The top of a long, deep pasteboard box (one in which coats and suits are packed), with one side removed, makes an ideal hospital ward where little stray dolls with broken arms and legs may come to be bandaged and properly treated. In that case, a doctor's services are necessary and he can be made truly impressive in a white suit with a red cross on the arm.

Matches, with the sulphur end removed, can be whittled into thermometer shapes, and marked off with pen and ink, and soda straws, cut in the proper lengths, make excellent feeding tubes. Once established, this doll hospital will keep the patient busy for some time each day, for, of course, the afflicted ones must have temperatures taken, baths given, and the doctor makes many rounds. Weird prescriptions are sometimes given. "This lady has a bad headache," complained the nursedoll. "Give her four teaspoons of mucilage every morning," commanded the oracle.

Blowing soap bubbles is a good way to pass an hour or two, particularly if the patient is well enough to participate in the fun, and some other member of the family can be induced to enter the lists. Lukewarm soapsuds, to which has been added a little glycerine, I have found a satisfactory "bubble solution." Offer prizes for the largest bubble, the prettiest one, the one that lasts the longest, etc. If a pipe breaks, substitute a truncated cone of stiff cardboard, a straw with the split ends turned back about 1/16 inch, or a spool, the cone blowing quickly large bubbles, while the straw and spool produce tiny ones. A plate wet with the suds may be inverted and bubbles piled up in a mound. An old blanket or rug may be used to throw the bubbles on, or an open window may invite the floating spheres to set out on an aerial trip, leading to stories of where they went, what they found and what finally became of them.

## ATTRACTIVE AMUSEMENTS.

Making scrapbooks is a popular amusement and is particularly interesting when the youngster is making them for some other little boy or girl less fortunate than himself. The picture puzzle craze still exists among the little folks, and new puzzles may easily be made by pasting magazine covers on stiff cardboard and cutting it into sections; or if a little education is not objectionable, maps may be made in the same way.

Of course, there are any number of amusements which are not mentioned. Simple card games like casino and "old-maid" may be taught to children of average intelligence. The principal thing is to see that no undue strain is put on easily-excited minds and that the new strength is not overtaxed.

Convalescent children usually enjoy their food, but occasionally we find some who are disinclined to eat, especially such things as milk, eggs, beef juice, etc. When one of these is to be taken from a glass, paste a round of paper to the bottom of the glass, enclosing between the glass, and the paper a "s'prise," which may be a nickel or a penny, a small picture, a peppermint wafer and so on, and the glass will usually be emptied promptly to see what the "s'prise" is.

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## CHILDREN POISONED THROUGH CARELESSNESS.

Chas Everett Warren talks about this subject in his Twilight series in the *Medical Fortnightly*. Says he:

Poison to the laity, means something that kills, be it a painful or painless death. By the daily records of poisons taken with suicidal intent it is quite evident that the common people have a limited list to choose from and do not choose delightful ones. A dose of strong carbolic acid, corroding the living tissues, eating to and into muscle and bone, gnawing through the throat and stomach, is not a particularly pleasant thing to think of and a still more horrible thing to experience. Add to this the agony of mind resultant upon the consciousness that death is inevitable and we have a fearful combination of bodily and mental suffering. For observation proves that in the vast majority of cases, your would-be suicide repents of the intent and act, and longs, far more earnestly and passionately, to undo that which has been done than he or she did to do the deed.

Experience also teaches us that in some cases we can counteract the effect of poisons affecting the functions of life, but we cannot counteract or repair the destructive effects of a poison upon the organic elements and organs of the body.

But the poisons which I had in mind, in the beginning, are of a far different nature. In fact no poison at all, in itself, but yet a possible factor in death by poison.

My little girl brought home the article from the local grocery store. It was a homeopathic bottle without any label, filled with sugar pellets, in every way similar to common methods, but as to form of container and contents, of dispensing some of the most active medicines—and poisons.

I had insistently and emphatically cautioned my little girl against ever eating any of the contents of the stock or dispensing bottles which are usually a part of the working stock of a physician's outfit, and which, in spite of every caution and care, may, for a moment, be left within reach of busy fingers.

But little brother, as we call him, has not arrived at the age of even elementary discretion and discrimination. To "be like papa," he asks for a bottle of pills when he goes to the store, and, until he was prevented, played doctor with these pills, and generously dosed himself and his younger sister with these imitation pills. And there is no telling when the time might come when the supply of imitation pills being exhausted, they might be replaced by the real article of deadly power.

Nearly every household has its collection of home remedies, not always so strenuously kept under lock and key as not to be accessible to the children.

We must acknowledge that the child has no power of discrimination between what is good and what is bad for him. And if a child buys sweets in every way, shape and form resembling the bottle of pills in the home medicine case, of high potency and deadly efficiency in more than moderate doses, why—he or she reasons with childish simplicity—are these real pills not just as good to eat and just as harmless as the candy counter pills? That this sometimes happens, short but pathetic items in the daily newspapers, or a case in practice, prove.

Forethought, made more cautious by experience, teaches us to consider consequences, but the man who caters to childish fancy does not always foresee any consequences beyond the possibility of money-making by novelties. The man who invented candy beads for Christmas tree decoration had a novel idea, but he never thought of the consequences that might ensue. A child might indulge in them without harm, but if he or she makes a diet of glass beads then it may be another case—for the doctor.

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Children of a larger growth as well may be victims of this neglect of consequences. Water of ammonia put up in whiskey bottles and more especially bug-poison dispensed or kept in beer bottles have been the accidental cause of many cases of poisoning.

All of which goes to show that it is dangerous not to consider the consequences that may follow heedless negligence.

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## TWO KINDS OF SWEATING.

The *Hospital* describes two forms of sweating, the one when the blood pressure is high, and the other when it is low. The first form is particularly liable to occur in fat, heavily-built people, and is seen more particularly when ether is the anæsthetic used. It is more likely also to come on when there is some degree of cyanosis. This form is associated with marked muscular action, and this is the reason why some surgeons do not like ether as an anæsthetic, because they say that the preliminary stimulation reacts on the patient later.

When a preliminary dose of one of the opium compounds now so frequently used as concomitants to general anæsthesia has been given, sweating is much more common. For example, when morphine has been used without atropine, sweating of the uncovered parts more especially is marked, with atropine in combination it is not so striking. With the newer opium derivatives, such as pleistopon and pantopon, sweating may on occasion prove troublesome, the patient's shirt becoming almost saturated. This is especially the case when no oxygen is administered at the same time as the anæsthetic, and when open ether is given in combination with pantopon or scopo-morphine.

### The Importance of the Second Type.

The other form of sweating is of much greater surgical importance. It occurs when the blood pressure is low, and is a signal that shock or collapse will shortly supervene, and therefore it is a thing which the anæsthetist will be anxious about, particularly if it occur early in a long operation. Its importance lies in that it is an indication of serious vascular disturbance rather than in the mere fact of its occurrence. It should always be a sign for which the administrator should be on the lookout; as soon as it is observed steps should be taken to combat shock by injection of fluid into the system and by raising the blood pressure with such drugs as pituitary extract. It is better, however, rather to prevent its occurrence by putting the fluid into the patient before the operation than by trying to treat the shock after the sweating has already occurred. For that reason the anæthetist should examine his patient carefully before giving the anæsthetic, not merely with regard to lung and heart conditions, but also with regard to blood pressure and liability to shock. This last is, of course, exceedingly difficult to estimate, but practice and experience will enable the anæsthetist to recognize, just as easily as the experienced surgeon does, those cases in which prophylactic measures should be taken to obviate any danger from shock.

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## HYGIENE OF THE MOUTH.

Dr. Bonnes, as reported by the *British Medical Journal*, calls attention to this important matter, and comments on the too general neglect of the teeth. He points out the close relationship the hygiene of the mouth bears to a great variety of pathological processes. Affections of the mouth, indeed, are important factors in nearly all respiratory and digestive ailments, owing to microbal infection from the inspired air and the fermentation of particles of food in the buccal cavity. Buccal sepsis predisposes to anginas, oedema glottidis, leucoplakia, adenitis; while various observers have

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noted the close connection of dental troubles with those of the visual apparatus. Septic gastro-enteritis of bucal origin is by no means uncommon. The practice of cleansing the teeth ought to be begun in early childhood, and as much during the first dentition as during the second. The author recommends cleansing the teeth after every meal with a red rubber brush. He believes this does not injure the gums, and their vitality is not lowered by bleeding. The elasticity of the brush, too, allows of more energetic friction without damaging the enamel. The brush can be sterilized by boiling. After reviewing the various forms of dentrifice on the market—several of which, especially the carbolated dentifrice and those of oxygenated water, he condemns as being injurious to the buccal mucosa—the author gives his adherence to the paste form of dentifrice. This, he says, is the best and most practical. It ought to contain an inert and insoluble powder; an antiseptic, miscible and in definite quantity; and a more or less fluid excipient, capable of maintaining the contact of the other constituents.



## KEEPING TRACK OF THE SPONGES IN OPERATIONS.

The plan outlined by Lockwood in the *Jour. of Missouri State Assoc.*, briefly, is as follows: In making gauze sponges, having a numeral sewed in colored silk or stamped with indelible ink, of a harmless character, in one corner of each sponge. This renders the figures indestructible in sterilizing the sponge. Have three packages of sponges arranged as follows: first package must contain small sponges, fifteen in all, numerals running from 1 to 15. This completes the first series and the package is to be labeled A 15. The letter A designates the size of sponges contained in the package and the numeral the number it contains. The second series must be a size larger than the first, running from 1 to 10, labeled thus: B 10. Third series is still larger than B, running from 1 to 5, labeled C 5. This package should contain five large sponges or napkins used both for absorbing sponges and viscera towels in abdominal sections. Have sponges made uniformly, each package maintaining a regulation size. The letter on the package indicates the size of sponges contained therein.

When the operation is finished, whether minor or major, count out the sponges by actual notation and if any number be lacking to complete the restored series, never cease searching until the missing number is found. If one or more packages of sponges are used in an operation it is as easy to complete the count in several series as it is in a single series, except that it takes more time. If all the sponges are not used in any one package in a given operation, count out the unused sponges along with the rest to complete the full number in that particular series. While this may seem strenuous and undue precaution imposed on the surgeon, yet Lockwood believes that such methods would completely avert the possibility of leaving sponges and other materials in the abdominal cavity. A similar numbering plan is suggested for instruments.



## USES OF THE HOT WATER BOTTLE.

The hot water bottle may be made to serve several useful purposes. Filled with small pieces of cracked ice, it takes the place of an ice cap. In congestive headaches it may be filled with cold water and applied to the forehead or back of the neck. Leaky bottles should not be discarded. If filled with hot sand or salt a bottle that is not water-proof is still of great value. After using a hot water bottle and it has been drained by hanging mouth downward it should be inflated with air before screwing in the plug.

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# MEDICAL PHARMACY.

## DISPENSING OF EYE SOLUTIONS.

IN a paper read before the Kentucky Homeopathic Medical Association, Dr. Orrin L. Smith made the following suggestions regarding the dispensing of solutions intended for use in the eye, which might be advantageously adopted by pharmacists:

"The lack of special care by pharmacists in dispensing solutions intended for use about the eye, the careless use thereafter by patients and the altogether too frequent accidental introduction of destructive solutions in eyes, led me, some years ago, to devise some method that would at least decrease, if not eliminate, these dangers.

"As a result a substantial pasteboard box was ordered that would exclude dust and light and accommodate two half-ounce bottles. A special compartment for droppers was so arranged that with their insertion in the apertures of the partition, their proximal ends were not in contact with each other or the box.

"Considering that eye droppers have been almost universally dispensed without attention to special cleanliness, and left by users on shelves exposed to dust and wash-basin splashings, etc., it seemed wise to deliver to the patient a sterile dropper and then instruct him in the care of same.

"After much experimentation with the sterilizing proposition, we found black or red gum to be the only practical form of rubber that would sterilize satisfactorily, for with every attempt to sterilize the white rubber there would occur the white sulphur deposits so annoying to all concerned.

"For the further protection of the patient it seemed wise to attach simple direction relative to the care of the solution, so that the following instructions are plainly printed on the top of every box containing eye solutions prescribed by me and dispensed by my own pharmacist.

"'As eye solutions are sensitive to light, heat and dust exposures, keep bottle in box, out of reach of children, in a dark, cool place, and standing upright. This dropper has been sterilized and is ready for use, after which rinse well in hot water and return immediately to proper place in box.'

"Latterly to further safeguard those patients who do not obey directions, and whose solutions are dispensed by other pharmacists than my own, I stamp across each prescription blank in red ink the following: 'Dispense in rough amber bottle.' This color protects adrenalin and silver solutions, and the rough surface announces at once, even in the dark, that the bottle contains an eye solution.

"So far as I have been able to ascertain there never has been in use for any purpose whatsoever a rough amber bottle.

"It would seem that the general use of the above method of dispensing solutions or even the use of the rough amber bottle would greatly limit at least the accidental installation of alcohol, carbolic acid, iodine and other medicaments so destructive to the eye."

## DIFFICULTIES IN EVERY-DAY DISPENSING.

Mr. Wyatt, at the meeting of the Liverpool (England) Chemists' Association, offered the following notes upon every-day work at the dispensing counter, not claiming for the methods advocated either novelty or infallibility, but simply recording them as practical ways out of difficulties such as present themselves to every practicing pharmacist.

(1) *Serum in Mixtures.*—The oral administration of sera and vaccines is fre-

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quently resorted to nowadays, and when prescribed in mixture form some menstruum of a preservative nature must be used, or the preparation will in a short time become entirely changed. Glycerin, alcohol, and chloroform water are the three best adapted to the purpose, but in the case of alcohol or an alcoholic tincture not more than 25 per cent should be used, or there is precipitation of the serum.

Examples of these prescriptions are the following:

Seri Antithyroidi Moebius.....m320
Sp. Vini Rect.....℥i.
Glycerini .....℥iv.
Aquæ .....ad ℥iv.
M. ft. mist. ℥ij ter die.

Dilute the serum with the glycerin and half the water, and pour into the alcohol diluted with the rest of the water.

Vaccini Pneumococci,
1 C.c. — 10,000,000.....mxviij.
Glycerini .....℥i.
Aq. Chorof.....ad ℥vj.
M. ft. mist. ℥ss. quaque secunda hora.

(2) A frequent difficulty one meets with is where a nitrate is ordered with an acid causing liberation of nitrous acid, and consequent development of unlooked for colorations in otherwise seemingly simple preparations.

(a)

Potass. Iodid.....48 grains
Sodii nitritis.....12 grains
Liq. Nitroglycerini.....mvj.
Sodii Benzoatis.....72 grains.
Syr. Zingiberis.....℥vj.
Aquæ .....ad ℥vj.
Ft. mist.

With 20 grains sodium bicarbonate added to keep the mixture alkaline no coloration was produced even on keeping.

(b)

Theocin Sodii Acetatis.....5 grains
Caffeinæ Citratis.....4 grains
Sodii Nitritis.....2 grains
Ft. cachet.

Half the amount of caffeine was used instead of the citrate, and the nitrite was rubbed down with dried sugar of milk, after which the cachets kept very well without any smell or oxids of nitrogen being formed.

(3) The use of senega as an emulsifying agent is not so general among prescribers as it ought to be, considering its utility and the advantage it presents of not making a thick gummy preparation.

(a)

Paraldehydi .....℥iij.
Syrupi .....℥iiij.
Tinct. Aurantii.....mxxx.
Liq. Senegæ.....℥j.
Aquæ .....ad ℥iij.
℥j. for a dose.

This shakes up easily, and is not so bad to take as a draught made with gum. The doctor who ordered it wanted a thin preparation, and was well satisfied with the emulsifier. (*b*) An unusual quantity of chloroform in the next sample gave no trouble when shaken with a drachm of Liq. Senega before adding to mixture:

(b)

Liq. Morph. Mur.....℥ij.
Tinct. Camph. Co.....℥ij.
Vini Ipecacuanhæ.....℥lj.
Glycerini .....℥iv.
Chloroformi .....mxv.
Liquoris Cocci.....mv.
Aquæ .....ad. ℥iv.
M. ft. Mistura.

(c)

Pot. Chloratis.....℥ij.
Tinct. Myrrhæ.....℥ij.
Inf. Senegæ.....℥ij.
Aquæ .....ad. ℥vj.
Ft. Gargarisma.

This is often ordered by a local doctor, and is a good example of the utility of senega.

(4) The order of mixing is a cause of variation in the color of some mixtures and of the density of precipitates naturally occurring in others.

(a)

Ext. Cinchonæ Rubræ Liquidi.....℥iv.
Auri Chloridi.....1 grain.
Inf. Gent. Comp.....ad ℥viij.
M. ft. mist.

If the gold salt be added to the mixture last diluted with 2 ounces of the infusion the precipitate is bulky and light colored, but if the process is reversed the precipitate is purplish and very dense.

(b)

Calcii Glycerophosph.....℥ij.
Sodii Cinnamatis.....20 grains.
Acidi Phosph. Dil.....℥i.
Liq. Atrop. Sulph.....mviij.
Glycerini .....℥j.
Inf. Aurantii Comp.....ad. ℥iv.
M. ft. mist. Sd. ℥j. ter die.

Dissolve the sodium cinnamate in infusion q.s., then add to the glycerin, and to this the calcium glycerophosphate with

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the acid and make up with the rest of the ingredients. In this way the cinnamic acid thrown out is very finely diffused, and requires no suspension.

(c)

Sodii Salicylatis.....3iij.
Potass. Bicarb.....3j.
Tinct. Guaiaci Ammon.....3iv.
Emulsionis Petrolei.....3ij.
Aquæ Chloroformi.....ad 3viij.
M. ft. mist.

Make a saturated solution of the salicylate in chloroform water, add the tincture of guaiacum little by little, and pour the mixture into the emulsion, shaking well finally, and the bicarbonate dissolved in the rest of the chloroform water. The salicylate dissolves the guaiacum resin and makes a very smooth mixture.

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## OINTMENTS AND THEIR USES.

Corbett, in the *Cleveland Medical Journal,* considers this subject. He says that as diseases of the skin were the first to be recognized and treated, we naturally infer that the use of external applications was in vogue at a very early time. We know that medicinal ointments were used in China and India many centuries before the Christian era and with the rise and development of the Arabian school of medicine, external medication by means of ointments came into more general demand. Emerging from the dark ages at the time of the Renaissance, vague theories prevailed in the healing art which continued more or less dominant until the last century. Thus the color of the ointment was considered of highest importance. The first to ascribe therapeutic effect to color was Averoes (1198 A. D.), who said: "White is refrigerant, and red is hot, from the fiery particles with which it manifestly abounds." This theory to a certain extent has survived and with a more intimate knowledge of the effect of the different rays of the solar spectrum on the human organism it still may be demonstrated that this empirical assumption is founded on a demonstrable fact.

During the sixteenth and eighteenth centuries polypharmacy was at its height and the composition of ointments partook of the general custom. Even in comparatively modern times the ointments which bear the names of Vigo and Wilkinson may be mentioned as examples. The present age of medicine is characterized by an effort to attain scientific accuracy and while many things remain obscure, yet the number of demonstrable facts is gradually increasing.

For the modern use of ointments to their full extent we are indebted to Ferdinand Hebra (d. 1880), who first successfully combatted humoral pathology as applied to diseases of the skin. This investigator and great clinical teacher demonstrated that many diseases of the skin, supposed to be due to some peccant humor in the blood or vague dyscrasia of the system, were caused by local conditions and remedied by local measures. These he employed with consummate skill.

In composition, ointments consist of a base or vehicle and certain medicinal substances incorporated therein. Both the base and ingredients vary according to the therapeutic object to be attained. From the clinician's point of view, ointments may be considered under the following general varieties: First, protective, emollient or soothing, sometimes known as simple ointments; second, astringent; third, stimulating, formerly called alterative; fourth, antiseptic; fifth, absorbent, for introducing medicine deeply into the follicles of the skin or through the absorbents into the general system.

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## FATAL ERROR IN POPULAR MEDICAL BOOK.

A fatality due to a misprint in a work known as "The People's Doctor" had its sequel in the Paris Law Courts last Saturday. According to the evidence, a cabinet-maker named Tourneux went home one day the worse for drink and asked his wife to send to a

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pharmacist for an antidote, as he had some work to terminate. The wife looked up a prescription in a book from the family library, which was "The People's Doctor" in question, and copied the following formula: Water 100 grammes, peppermint water 15 grammes, ammonia 15 grammes. To be taken in two or three doses. She copied this recipe carefully and sent it to M. Ravault, pharmacien, 52 rue de Folie Regnault, who duly dispensed the preparation, which the cabinet-maker took and died, poisoned. Why and how remained to be proved. Inquiry showed that the author of the medical book in question is Dr. Georges Migot, a Parisian practitioner, but who used the name Dr. Dayaud for it. The work was originally published at Ghent, and only issued later in Paris. But in the later edition a grave error crept in, and the formula that contained the indication 15 grammes of ammonia should have read 15 drops. Under the guidance of her legal advisers, Mme. Tournieux prosecuted Dr. Migot and M. Ravault for homicide by imprudence, the latter being also charged with supplying a remedy without a doctor's prescription, which is an infraction of the Pharmacy Law. The doctor was sentenced to three months' imprisonment and the pharmacist to one month, but the sentences were rescinded under the First Offenders Act. They were further condemned to pay jointly 1,200 fr. damages and an annual pension of 300 fr. to the widow, as well as an annual pension of 200 fr. to each of the children until the age of eighteen years.

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### SURGEON'S PUMICE SOAP.

Mr. J. K. Thum, in the *American Journal of Pharmacy,* gives the following formula for a pumice or grit soap for removing dirt and foreign matters from the hands of operating surgeons:

Cottonseed oil.....500 c. c.
Stearic acid.....500 grams.
Sodium hydroxide.....150 grams.
Alcohol .....150 c. c.
Sodium chloride (20-per-cent. solution) .....a sufficiency.
Distilled water.....a sufficiency.
Powdered pumice.....300 grams.

Heat the cottonseed oil and stearic acid until the acid is completely dissolved. Then add the sodium hydroxide, dissolved in a litre of distilled water, and heat for fifteen minutes with constant stirring. Next add the alcohol and stir until saponification is effected, which will be apparent in a few minutes by the homogeneous appearance of the mixture. Then add one litre of 20 per cent solution of sodium chloride and stir vigorously. Allow to stand until the soap is hardened; the alkaline liquid which remains at the bottom of the container is then dried out by punching a hole in the soapy mass on one side. The soap is then washed two or three times with distilled water, melted, and while still on the fire the powdered pumice is added and the whole thoroughly incorporated. The hot soap is then poured into suitable moulds, and allowed to remain for twenty-four hours to set.

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### SCARLET RED OINTMENT.

Scarlet red is sometimes recommended in the form of an ointment for diseases of the eye. The dye should always be finely divided and intimately mixed with the base before it is dispensed. The *Prescriber* suggests that it be dissolved in chloroform before incorporation with the base, or that the base be melted, which will dissolve the scarlet red if the latter be not in too large quantity. The ointment may be 4, 5, 8 or 10 per cent, although in eye practice weaker ointments are preferable, of which the following is an example:

Scarlet red.....3 grains.
Wool fat.....5 drachms.
Petrolatum .....4 drachms.

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### INCOMPATIBILITY OF COCAINE AND MERCURIC OXIDE.

Maurin (*Rep. de Pharm.*) states that a patient who had been inuncted with

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an ointment of cocaine hydrochloride and mercuric oxide in a base of vaseline, suffered intense pains. The cause was traced to corrosive sublimate, which had been produced by the interaction of the cocaine salt and the mercuric oxide. An experiment was then made with an aqueous suspension of yellow oxide of mercury and cocaine hydrochloride, when the formation of corrosive sublimate was demonstrated. The reaction does not take place so readily with red oxide of mercury.

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### AN INCOMPATIBLE CHLORAL MIXTURE.

Mr. Donald McEwan brought under the notice of the Pharmaceutical Society of Great Britain the following prescription:

| | |
|---|---|
| Syr. chloral | ℥j. |
| Magnes. pond | ℥j. |
| Vin. ipecac | ℥j. |
| Tr. belladonnæ | ℥j. |
| Aquam ad | ℥vj.—M. |

The prescriber on the day following that on which the medicine was dispensed brought the bottle to the pharmacist saying he meant to give his patient syrup of chloral, but was afraid spirit of chloroform had been put in instead. Experiment made it evident that chloroform had resulted from reaction between the chloral hydrate and the magnesia, chloroform and magnesium formate being among the products.

When the prescriber was informed of this he omitted the magnesia. Mr. McEwan further pointed out that the magnesia also liberates alkaloid from the belladonna and ipecacuanha preparations, and that each dose of the mixture contained 3 minims of chloroform and 2½ grains of magnesium formate.

Messrs, Dott, Duncan, Merson, and Hill discussed the paper, the first named remarking that medical men should have added to their curriculum a course of 200 lectures on incompatabilities.

The Chairman thought Mr. Dott's suggestion probably a good one though the medical curriculum is rather overloaded, and he was afraid that not even 200 lectures would exhaust the subject; they were always learning something new in the way of incompatibility.

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### STORY OF A NEW HAT.

(From *Brush and Pail.*)

A business man had purchased a new stiff hat, and he went into a saloon with half a dozen friends to fit the hat on his head. They all took beer and passed the hat around so all could see it. One of the meanest men that ever held a county office went to the bartender and had a thin slice of Limburger cheese cut off, and when the party were looking at the frescoed ceiling through their beer glasses, the wicked person slipped the cheese under the sweat-leather of the hat, and the man put it on and walked out. The man who owned the hat is one of your nervous people who is always complaining of being sick, and who feels as though some dreadful disease was going to take possession of him and carry him off. He went back to his place of business, took off his hat and laid it on the table, and proceeded to answer some letters. He thought he detected a smell, and when his partner asked him if he didn't feel sick, he believed he did. He then turned pale and said he guessed he would go home. He met a man on the sidewalk who said the air was full of miasma, and in the street car a man who sat next to him moved to the end of the car, and asked him if he had just come from Chicago. The man with the hat said he had not, when the stranger said they were having a great deal of small-pox there and he guessed he would get out and walk, and he pulled the bell and jumped off. The cold perspiration broke out on the forehead of the man with the new hat, and he took it off to wipe his forehead, when the whole piece of cheese seemed to roll over and breathe, and the man got the full benefit of it, and he came near fainting away.

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# ELECTRO-THERAPY.

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## X-Ray in Diagnosis of Urinary Calculi

BY A. L. GRAY, M. D., RICHMOND, VA.
Roentgenologist to the Virginia Hospital and to St. Luke's Hospital, Richmond, Va.

WHILE the value of X-ray examinations in cases of suspected urinary calculus is being generally appreciated, there are conditions which the presence of calculi often so strongly simulate that the writer will attempt to emphasize some of the most important, and at the same time point out some of the difficulties that confront the X-ray specialist in arriving at his diagnosis.

The roentgenologist is too frequently called upon only as a last resort, after all other means of ascertaining the trouble have been exhausted, whereas had the roentgen examination been made earlier the patient could have been saved much time, suffering and expense.

The condition most commonly confused with renal calculus is pyelitis due to other causes. It has been considered more or less essential by the general profession that attacks of "kidney colic" shall have been a part of the patient's previous history. This, however, is not at all necessary, for cases often present themselves with calculi of very large size, that have never caused colic of sufficient severity for the patient to recall it. The stone may or may not give rise to pain or tenderness, even its passage through the ureter may be painless, as has been conclusively demonstrated by Drs. Bevan and Potter, of Chicago.

A persistent pyelitis, especially if the urine contains blood, microscopic or otherwise, should call at once for a roentgen examination.

*Read before the forty-first annual meeting of the Medical Society of Virginia, at Norfolk, October 25-28, 1910.

It is impossible by symptoms and clinical findings to determine whether a calculus, if present at all, is in the kidney or the ureter. It is not rare for the symptoms to point to a calculus on one side, when it is really present on the other.

Of eighty consecutive cases examined for calculus, reported by Dr. Eastmond, of Brooklyn, twenty-three were positive, and fifty-seven, negative. Fifty-eight of these cases presented typical symptoms, and of this number fourteen, or 24 per cent., were positive. Of the remaining twenty-two, with vague symptoms, calculi were found in nine, or 41 per cent.

Dr. Eastmond has compiled the following table:

| URINE | Sand | Pus | Blood | Both | None | Total | Grand Total |
|---|---|---|---|---|---|---|---|
| Typical Symptoms with calculi | + " | 1 | 1 | 1 | 1 | 4 | 8 |
| | 0 " | 1 | 2 | 1 | 1 | 4 | |
| Vague Symptoms or symptoms referred to other points than site of Calculus. | + " | 2 | 1 | 2 | 0 | 5 | |
| | 0 " | 5 | 1 | 0 | 4 | 10 | 15 |
| Typical Symptoms 0 Calculi | + " | 3 | 6 | 4 | 5 | 18 | 44 |
| | 0 " | 5 | 4 | 8 | 9 | 26 | |
| Vague Symptoms 0 Calculi | + " | 0 | 3 | 0 | 6 | 9 | 13 |
| | 0 " | 1 | 1 | 2 | 0 | 4 | |
| | | 18 | 19 | 17 | 26 | | 80 |

He further states that, from such a summary he is convinced that the presence or absence of urinary calculi cannot be determined from the history of the patient and the urinary findings.

It is by no means wise, in the writer's opinion, to disregard either the urinalysis, or other clinical findings, but care

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should be taken lest the roentgenologist allow these to exert an undue influence upon him in arriving at his diagnosis.

The other condition which is perhaps most apt to be confused with lithiasis is sub-acute appendicitis.

The writer has in the past twelve months discovered a number of calculi in the kidneys or ureters in patients who had previously undergone an operation for appendicitis, without experiencing the customary relief. In one of these cases a calculus was removed from the lower end of the left ureter, the patient having previously had an appendectomy performed, but following the operation the symptoms continued.

There are many problems that confront the X-ray specialist that necessitate the most careful technique, else he is liable to grave error, and will be confronted with the embarrassment of having the surgeon fail to verify his findings.

The objects giving rise to the greatest difficulty in making these examinations are phleboliths. These are found quite frequently in the veins of the pelvis, and if a single one happens to be along the course of the uterter it is exceedingly apt to be mistaken for a calculus. Fortunately, however, they are usually in such numbers and in such locations that they can be readily differentiated from stones. It must be borne in mind that calculi are as apt to occur when phleboliths are present as when they are absent, and it is not uncommon to find both.

In the presence of a doubtful shadow along the course of the ureter, it is especially desirable to have the ureter catheterized, and, with the stylet inserted, make a second radiograph, or better still, stereoscopic radiographs which will determine the relation of the concretion to the ureter.

Other shadows tending to confuse may be caused by scar tissue existing in a kidney where there have been localized areas of inflammation. Deposits of calcareous material may be present in the muscles or ligaments. These, though of rare occurrence, often strongly resemble calculi.

Another source of confusion is calcification of lymph-nodes within the abdomen. The presence of a mole has in several instances been known to give rise to an erroneous diagnosis. The writer has seen two instances in which a mole in the skin over the lumbar region has shown on the negative, but in both of these instances its presence was noticed and did not lead to error.

It is very important to inquire what drugs, if any, the patient has been taking previous to the X-ray examination; for Blaud's pills, salol capsules, bismuth, iodine, and silver preparations will cast shadows quite similar to stones.

The customary dose of castor oil previous to an X-ray examination for calculi should never be neglected.

It is very necessary to protect carefully your plate, especially in warm weather lest a drop of sweat may be responsible for what appears to be a sharply defined and clear cut stone.

In examination for stone in the bladder, it is the custom of some operators to place the patient either in the sitting posture, or its equivalent in order to strike the true axis of the pelvis and thereby to avoid the overlapping of the bone shadows and that of the calculus if it is present.

It should be borne in mind that although the X-ray will demonstrate the presence of a concretion, provided it has enough density to enable it to cast a shadow, the inability of the rays to show the ureter itself renders it impossible to say absolutely that a concretion is not immediately without rather than within its lumen. Sterescopic plates made with the styletted catheter in position will give the desired information with more certainty than any other method of procedure.

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By the injection of a solution of collargol or of argyrol into the pelvis of the kidney through the ureteral catheter, the shape, size, and much concerning the conditions of the renal pelvis may be demonstrated from the radiograph. With the modern almost instantaneous methods of picture making so great in the accuracy with which a diagnosis of calculus can be made that in the hands of competent men errors will occur in less than 5 per cent. of the cases.

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## IONIZATION IN INFLAMMATION OF LOWER BOWELS.

By J. Curtis Webb, M. A., M. B., B. C. Cantab., in *The Lancet.*

It is not proposed to enter into any preamble as to the etiology, pathology, or symptoms of the various forms of inflammatory affections of the colon and rectum, and it would also appear to be out of place to attempt a review of the various treatments, dietetic, medicinal—whether by the mouth or per rectum—climatic, or balneological, that are individually or collectively advocated in these conditions. It is only designed to draw the more serious attention of the medical profession to a method of treatment as yet, I believe, not generally known and seldom used, which, when employed in conjunction with a suitable diet and careful regulation of the bowels, has yielded in my hands and in the hands of others who have employed it such gratifying results that it is felt that its adoption in the type of case referred to should be more general.

In *The Lancet* of Nov. 4th, 1905, was published a letter of mine on the treatment about to be described, which was based on a paper published by Dr. Sydney M. Whitaker in the *Archives of the Roentgen Ray*, 1904-05, p. 171. At that time I only quoted one case, but since then such good results have been secured that some further remarks on the subject appear to be warranted.

The treatment is based on the principle of ionization, whereby the passage of a constant current propels the basic ions of any salt in solution from the positive towards the negative pole. If, therefore, the rectum and colon be filled with a solution of the required salts, and connected to the positive pole of a source of constant current, the negative pole being on the abdomen and back, and a current be passed, there will be a passage of the metallic base of the salt into or through the diseased mucous membrane towards the negative pole.

Owing to the intolerance of the rectum to holding large quantities of fluid for a sufficient time to enable the cells of the mucous membrane to take up enough the the medicaments to be of any therapeutic value, the treatment of colitis by simple injections has usually been but of the nature of a pure lavage or washing, that is to say, to remove from the diseased bowel surface any fæcal material adhering thereto by antiseptic or stimulating solution.

The fact has long been recognized that solutions of salts of zinc applied to epithelium-covered surfaces have a particular healing effect in inflammations of these surfaces, and this fact is made use of in the treatment of the above diseases in the following manner:

The bowel is first thoroughly washed out in the morning with a copious plain warm water enema, repeated if necessary. It is important to cleanse as far as possible the surface of mucous membrane, and thus give the ions about to be introduced every opportunity of penetrating uniformly. If, however, as is sometimes the case, this procedure either exhausts the patient or causes pain and consequent irritability of the bowel, it must be dispensed with, and all that can be done is to ensure a free evacuation shortly prior to treatment.

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The actual technique of the treatment is as follows. The abdomen is first well soaped and the lather left on. On to the skin are now applied four layers of Gamgee tissue (8 in. by 6 in.) well soaked in a solution of sodium bicarbonate (about a tablespoonful to half a wash-hand basin of warm water). The Gamgee should be laid on very smoothly, layer upon layer, so as to avoid any wrinkles, and on the last layer is placed a sheet of tin or lead (7 in. by 5 in.) connected by a cord to the *negative* pole of the source of current. Soaping the abdomen, using bicarbonate instead of chloride of sodium (the carbonic acid ion being less irritating than the chlorine ion), and the avoidance of wrinkles in the Gamgee, all help in avoiding those troublesome little ulcers which sometimes occur. If there be any acne or other spots on the skin each should be covered with a small piece of sheet rubber, or they may be thickly painted over with rubber solution or collodion. When all is in place cover with a large piece of thin mackintosh sheeting—to avoid wetting the bed or patient's clothes—and then turn the patient on the left side and apply an exactly similar arrangement to the lumbar region. A towel applied as a binder will keep all in place. Both abdominal and dorsal electrodes are to be attached to the *negative* pole, and a useful contrivance to simplify this can be made by any ironmonger by soldering three ordinary screw terminals into a stout strip of copper; the two conducting wires from the electrodes can be attached to two of the terminals, while a few inches of copper wire will join the third to the pole of the source of current. The rectal electrode may be of several varieties, but, in the writer's opinion, the best consists of a spiral of wire attached to a short metallic tube which carries a terminal for the positive wire, and which can also be fixed to the tube from a douche can. Over the wire spiral, which is 12 in. long, is fitted a stout india rubber tube closed at one end but with a lateral opening near the point. With the abdominal and dorsal electrodes in position the patient is now placed on the left side with a pillow under the buttocks and the shoulders low, and the rectal electrode is passed as far as possible—using soap or any non-greasy lubricant. This electrode is attached to a two-pint douche can, previously filled with a warm solution of sulphate of zinc, 2 per cent., which is hung a little above the level of the patient. About half a pint of the solution should be slowly run into the bowel and then the current *gradually* turned on till the milliampère-meter registers 15 to 20 milliampères. The flow of the solution which continues all the time of the treatment should be so regulated that there is the minimum discomfort produced, and if the whole two pints can be retained it is an advantage. The current should be allowed to flow for from 10 to 15 minutes and then *gradually* turned off, the various electrodes disconnected, and the patient permitted to get out of bed to empty the bowel. After the treatment an hour's rest should be enjoined. This procedure should be repeated once every three to seven days, according to the severity of the case and the tolerance of the patient.

It was previously recommended that $AgNO_3$ solution should be employed of a strength of 1/10 per cent., but it has been found more convenient to use $ZnSO_4$ solution instead, and the results are quite as satisfactory.

I have personally treated 14 cases of colitis by the above method, out of which number there has been but one failure. In this case the patient spends about seven months of each year in Egypt, where good milk and proper diet are hard to be obtained, and this fact has probably had some bearing on the unsatisfactory result. It is not claimed that all the remaining 13 cases were complete.

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and permanent cures, but though this most gratifying result is known to have been secured in 6, of the other 7 5 are so much benefited as to only have the occasional passage of mucus without pain and to have greatly immproved in general condition.



### ELECTRICAL TEREATMENT OF OBESITY.

A. Laquerriere, in Journal de Medicine de Paris, details Bergonie's electrical method of treating obesity by exercise of the various muscles, the surface of the body being covered with large electrodes, so that all the large muscular masses are affected. The operator then applies a tetanizing faradic current through the electrodes, in such a manner that there is a rhythmical action, the excitation lasting half a second and the interval of repose a half second. The current should be strong enough to cause marked muscular contractions. During this treatment the body becomes covered with sweat, but the patient feels no disagreeable sensations, only the contraction of the muscles. The heart and respiration are increased in frequency, in response to the need of increased oxygenation in the contracting muscles. There is no appreciable fatigue when the sittings are properly managed; the appetite is increased and sleep is improved; blood pressure is lowered as it is after simple exercise. One gets general active gymnastics, but involuntary ones, and without the interference of the psychic centers. It is difficult to find any other system of gymnastics that approaches this in the general action of all the muscles. This form of exercise may be used even for persons who are persuaded that exercise is bad for them. Since the movement is involuntary the nervous system does not become fatigued. In the fearful and the neuorpath one may get the benefits of exercise without their having any of the inconveniences of it. Bergonie has obtained brilliant results by this method in the obese, but the method may be employed also in all the nutritional troubles. This method is both preventive and curative, since it increases the musculature of the patient, and he will not again fall into the hygienic faults that have caused his obesity.



### X-RAY OF LIVING HEART.

The Berlin correspondent of the *Medical Record* reports that Gottwald Schwarz has succeeded in getting an X-ray picture of the heart during life. The patient was a male, 44 years old, in whom the heart shadow was of normal size and shape. But within this shadow there were a large number of irregular, dark shadow spots of the size of a bean, and at the upper portion of the left ventricle a cordlike, dark band, 3 cm. long and 2 cm. thick, which pulsated actively, hence lying beneath the surface of the heart. The phenomenon gave the impression as if a darning needle was embedded in the heart muscle. Close examination of the history revealed no evidence of the introduction into the body of such an object, and the conclusion was that the shadow was one of a calcereous deposit. In his younger days the patient was prize fighter and one day received such a blow over the region of the heart as to be rendered unconscious, and to be ill for several weeks. He apparently had a traumatic pericarditis, such as is described by Kaufmann in his "Handbook of Pathological Anatomy." If, as seldom occurs, calcium salts are deposited in the pericardium, then the heart appears as if surrounded by a ring or armor; giving rise to the "stony" or "armored heart." Simmonds has demonstrated by X-ray pictures the existence of such a condition as he confirmed post mortem.

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# THERAPEUTIC BRIEFS.

**Dandruff.—**

Can recommend this formula:

Hyd. bichloride.....gr. vj.
Formaldehyde, 10% sol.....3ij.
Salicylic acid.....3iss.
Spts. myristicae,
Alcohol .....aa ʒiv.

M. Sig.—Rub in scalp at bedtime, and have your barber shampoo you once a week with Grandpa's Wonder Soap, as the carbonate of potassium and ol. of juniper enters into the ingredients of soap and keeps the scalp clean.

**Cough Remedy.—**

Here is a dandy cough medicine and knocks a cold when taken in its forming stage, and palliates nicely even when it is on. So many patrons praised it. I tried it myself, and can vouch for it. As the combination is unusual, I give it, as a good doctor can see that it bears a cure upon the face of it, and nothing of a narcotic element in it:

Menthol .....gr. iv.
Elix. terpin. hydrate (plain),
Syr. hydriodic acid.....aa ʒij.

M. Sig.—Teaspoonful four or five times a day or night, taken plain and allowed to slowly trickle over the mucous membranes. A tickling cough, from the nasal pharyngial space, will soon be controlled.

**Whooping Cough.—**

Bradt advises the local treatment of the nasopharynx by swabbing the walls with the following solution:

Iodine
Carbolic acid aa..... .5 gram
Potass. iodid..... 1.5 gram
Glycerin ..... 15.0 gram
Water, to make.....100.0 gram

**To Abort a Boil or Carbuncle.—**

Try this and please your patients:

Salicylic acid.....gr. x.
Balsam fir.....gtt. xx.

M. Sig.—Saturate a piece of canton-flannel the size of a silver quarter, cover with oiled silk and strap down with rubber adhesive. Change in 24 hours if needed. You kill the germ in a few applications.

**Asphyxia.—**

Raymond, of Paris, recommends the injection of oxygen subcutaneously in cases of toxic asphyxiation, such as is seen in the crises of asthma, heart failure, uremia, broncho-pneumonia, and lobar pneumonia. Hypodermic needle is attached to the oxygen tank.

**Eczema.—**

When the eczema has healed, and the skin remains tender, itchy, and easily cracked, Ravogli recommends the following application:

Carbolic Acid.....dr. j.
Glycerin .....dr. j.
Rose water.....oz. iij.
Alcohol .....oz. iij.

to be rubbed gently on the skin with a cotton tampon.

**Gastric Ulcer.—**

Gerhardt gives for this complaint silver nitrate in solution, using at first .25 gram in 120 grams of distilled water, of which a tablespoonful is administered three times daily. Later the dose is increased to .40 gram in the same quantity of water.

**Irritable Bladder.—**

A doctor meets with many distressing cases of irritable bladders and burning of the urine, more especially among elderly people, and I have found this old-fashioned remedy the best of all:

Balsam copaibae,
Spts. etheris nitrosi,
Liquor potass.....aa ʒj.
Fld. ext. buchu.....ʒi.

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# SOME DOCTORS OF FICTION.

## X. THE ARABIAN NIGHTS.

### "The Weaver Who Became a Leech."*

By George Thomas Palmer, M. D.

IT HAS been our custom, in beginning each of these papers, to set down dates which will serve to remind us of about the time that the different books were written, the time that the different doctors of fiction were created. If I should attempt to so preface a chapter devoted to the "Arabian Nights" or "A Thousand and One Nights," I fear that I should be compelled to set down almost a thousand and one dates. For these tales are of very ancient origin. Masude, in the year 943, spoke of a Persian book, "A Thousand Nights and a Night," which was doubtless then a collection of tales already ancient; while Heroditus is said to have told some of these stories, 500 years before the birth of Christ.

In fact, the collection of stories was put in its present form about fifty years before Columbus discovered America. The edition which the old Judge had among his rarest treasures, was of the excellent translation made by Lane in 1840—a translation which, he often assured me, was a great improvement over the original French work of Galland, in that Galland's translation was "teeming with inaccuracies." So far as I was personally concerned, the "Arabian Nights" appeared so fanciful, fantastic and improbable that a few inaccuracies in translation could not affect it much one way or the other, but in expressing this idea to an old Judge I fear that I verified his suspicion that I was but an indifferent literary student anyway. To him an inaccuracy in translation was like a false note to the ear of a cultured and discriminating musician.

There is, in the "Arabian Nights," a doctor whom all of us should know. He was a rank imposter, to be sure, whose highest ambition it was to be a clever charlatan, but he represented many traits which are common to our own day and had difficulties in his domestic affairs with which we may readily sympathize.

This doctor of fiction was a weaver by trade and, so far as we know, a very good one. He became infatuated with a woman much above his rank in society and finally induced her to marry him. She was a clever and far-seeing woman and, to compensate for her social losses, she compelled her husband to enter into a bond with her, that she should always be permitted to dictate what he should or should not do and for the fulfillment of this bond, her husband set aside ten thousand dirhams. It was specifically stated that, in case the husband rebelled against his wife's dictation, she should be permitted to go her way and the ten thousand dirhams should go with her. And a dirham, I would have you to know, is equal to about nine cents in real United States money.

All went very well in the weaver's household until, one day, his wife went out to get water and saw, on her way, an itinerant leech, who had spread his carpet by the roadside and was treating the sick who had gathered about him, with simples, medicines, implements and muttered charms. The woman was impressed with the prosperity of the leech and put the following proposition to her husband when she got home:

*Since writing this chapter, I have found an interesting article dealing with the same story—"A Chapter in the History of Quackery." by Dr. James J. Walsh, of the Fordham University School of Medicine,—in The Journal of the American Medical Association, March 13, 1909.

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"'Verily my breast is narrowed by reason of thee and of the very goodness of thine intent; narrow means suit me not, and thou in thy present craft gainest naught, so either do thou seek out a business other than this or permit me my rightful due and let me wend my ways.'"

The weaver argued against giving up his trade and urged that his wife be patient; but, being an ambitious woman, dissatisfied with her lot in life, and having the poor fellow under bond to do her bidding, the fair dame pressed her point and won. Under her instructions, the weaver went each day to the camp of the leech, committing to memory the advice that the physician gave to his patients and learning, so far as his untrained observation would permit him, the leech's methods of practice. Finally he came home and made this announcement to his wife:

"'I have stored up the physician's sayings in memory and have mastered his manner of muttering and diagnoses and prescribing remedies, and I wot by heart the names of the medicines and of all the diseases, and there abideth of thy bidding naught undone; so what dost thou command me now to do?'"

"Quoth she: 'Leave the loom and open thyself a leech's shop.'"

Many a good weaver and many a good street car conductor have been sacrificed to make mighty poor doctors. Many a poor devil has hesitatingly entered upon the study of medicine, if not to gratify the ambition of his wife, on account of the desires of equally ambitious parents. Medicine is indeed a jealous mistress and she demands not only a certain amount of patient study and hard work; but an inherent love for the calling. The young man who undertakes medical study merely to please a father or mother who would see their son a member of a "learned profession"; or the one who practices the healing art simply because "narrow means suit not" his wife, is very apt to merely "store up the physician's sayings in memory" and to attempt to "master his manner, mutterings and diagnoses and prescribing remedies." Such students are satisfied when they "wot by heart the names of the medicines and of all the diseases"—they regard the practice of medicine as the affectation of a professional manner and the putting together of meaningless names of drugs with equally meaningless names of maladies. They attempt to practice by imitating the physical activity of the master, without considering the mental requirements of the calling.

And these poor fellows, as a rule, either drag out miserable existences as second-rate doctors, or fall into the field of quackery, where a mastery of the manner of mutterings is quite sufficient and is accepted as the equivalent of professional skill. Heaven help the man who becomes a physician because his wife wants to be a doctor's wife, or because his parent desires to become a doctor's father.

But the weaver realized that even a prophet is without honor in his own country, and he readily saw that his career of quackery could not prove successful among his own people. A weaver cannot become an "eminent specialist" in a generation in his home town, although thousands of men have attained that distinction among strangers in just the time that it requires to print the advertising section of a newspaper.

So the weaver sold his loom and he and his wife journeyed into a strange land, and having donned a leech's dress, he began to enjoy a period of ill-gotten prosperity. The leech had quickly grasped one of the cardinal principles of the advertising medical fakir. He stayed but a short time in one place and made it a rule not to re-visit the scene of his professional successes. The medical charlatan gath-

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ers all the people have for him on one trip through—he does not ask or expect that the populace will hang garlands on his tombstone. Finally, in their wanderings, the weaver and his wife came to the land of the Romans and visited the city in which Galen, the wise physician, made his home. But the weaver had never heard of Galen and, in looking for a place to spread his carpet, he rented the great physician's courtyard, and there he laid out his simples and his instruments and began to advise the populace what a competent physician he was.

Now Galen, if you will recall, was called both "Paradoxologus" and "Paradoxopoeus," and he ripped out over five hundred learned treatises during his life-time without the slightest effort, and yet he was not equal to a snap diagnosis of quackery. In fact, the weaver's conversation about his wonderful success in other lands, impressed Galen that he was doubtless "a skilled leech of the leeches of the Persians," and his settling down in Galen's courtyard confirmed that diagnosis.

> " 'Unless he had confidence in his knowledge,' argued Galen, 'and were minded to confront me and contend with me, he had not sought the very door of my house, neither had he spoken that which he hath spoken.' "

And Galen grew very curious to know something more of this eminent specialist who apparently threw down the gauntlet before him. So the great physician hung about the outskirts of the crowd and observed the leech "hitting the mark one while and missing it another while, so that naught appeared to Galen of his fashion whereby his mind might be assured that he had justly estimated his skill." That is, in "striking it right" in half the cases, the leech was quite "up to the average" of the doctors of Galen's class, and the great master could not determine whether he was a "skilled leech of the leeches," or an arrant quack of the quacks. We are, at times, in no better position in our own day. Of course, we know the self-confessed charlatan, whose advertising fills the newspapers; but among those who are not so gross and crude in their methods, it is often quite difficult to determine whether some men are really exceedingly clever or are rank imposters. The only way we can differentiate is by careful watching—and that method finally brought results to Galen with our friend the weaver.

> "Presently up came a woman, and when the weaver saw her afar off, he said to her, 'Is not your husband a Jew and is not his ailment flatulence?' 'Yes,' replied the woman, and the folk marveled at this; wherefore the man was magnified in the eyes of Galen, for that he heard speech such as was not of usage of doctors.
>
> "Then the woman asked, 'What is the remedy?' and the weaver answered, 'Bring the honorarium.'
>
> "So she paid him a dirham and he gave her medicines contrary to that ailment and such as would only aggravate the complaint. When Galen saw what appeared to him proof of the man's incapacity, he turned to his disciples and pupils and bade them fetch the mock doctor, with all his gear and rugs; and accordingly they brought him without stay or delay."

Of course, living in the year 150, when quackery was a comparatively undeveloped art, it was not surprising that Galen was impressed by the skill of a leech who could diagnose a case of flatulence by merely seeing the patient's wife afar off; but had the great teacher lived in our own day and generation, he would have regarded the very remarkability of the diagnosis as clinching evidence of fakery—

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an opinion which would have been confirmed by the promptness with which the leech demanded his money. Incidentally, while we are congratulating ourselves that our skill in detecting quackery has increased with the passage of time, we may also express our satisfaction that general conditions have improved for both physicians and quacks. The weaver collected a dirham—nine cents—for his clever snap-shot diagnosis, with medicines thrown in—which indicates to us, judging by the affairs of our own day, that the professional services of the honest, country doctor, medicines included, must have brought about four and a half cents, in the good year 150. And yet we of the twentieth century complain that we are an underpaid profession.

But we notice, that if fees were low, the honors and privileges of the greater physicians were proportionately high. Galen, upon concluding that the leech was a charlatan, had him brought before him "without stay or delay." The fakir of to-day, who is caught with the evidence of quackery upon him, shakes his state license in your face and asks you what you are going to do about it.

When the weaver was brought before Galen, the great master demanded to know what had led him into medical practice, and the weaver frankly told of the pressure which had been brought to bear upon him to induce him to give up the loom and take to physick. This may have interested Galen; but the distinguished old medic had his curiosity completely aroused by that snap diagnosis of flatulence, and calling the weaver aside (perhaps so that the pupils would not overhear), and treating him with the utmost kindness, Galen said to him:

> " 'Expound to me whence thou knewest that the woman was from a man, and he a stranger and a Jew, and that his ailment was flatulence?'
>
> "The weaver replied, ' 'Tis well. Thou must know that we people of Persia are skilled in physiognomy, and I saw the woman to be rosy-cheeked, blue-eyed and tall-statured. These qualities belong not to the women of Rome; moreover, I saw her burning with anxiety, so I knew that the patient was her husband. As for his strangerhood, I noted that the dress of the woman differed from that of the townsfolk, wherefore I knew that she was a foreigner; and in her hand I saw a yellow rag, which garred me wot that the sick man was a Jew and she a Jewess. Moreover, she came to me on First Day; and 'tis the Jews' custom to take meat puddings and food that hath passed the night and eat them on Saturday, their Sabbath, hot and cold, and they exceed in eating; wherefore flatulence and indigestion betide them. Thus I was directed and guessed that which thou hast heard.' "

When Galen had heard this, he advised the weaver to return to his trade and, to make this possible, gave him ten thousand dirhams to meet his wife's bond. Galen further admonished the weaver to avoid matrimonial alliances with women in higher station than his own.

The successful charlatan is usually a shrewd and clever man, his success depending upon his ability to quickly read those who come to him and to play to their special susceptibilities.. It has been said, with perhaps some justification, that if the quacks were not clever they could not successfully compete with ethical and cultivated physicians and prosper in spite of the low social plane on which society compels them to exist. The medical fakir frequently establishes himself with the patient by some remarkable observation concerning the individual's life, his habits or his health, and these things he learns by observing bits of evidence which are generally overlooked by more serious and more competent physicians. Other charlatans

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have agents who circulate among the people, ascertaining facts and conditions in the lives of individuals, and these are placed in the hands of the "master specialist" just before the individuals are ushered into his private office. I recall one highly intellectual individual who was profoundly impressed with the following conversation with a quack:

"One of your parents—your mother I believe—died of lung trouble—probably tuberculosis, did she not?" queried the quack.

"Why, yes," replied my astonished friend.

"And the people on your father's side have generally lived to a ripe old age?" continued the charlatan.

My friend nodded.

"You have had some acute lung trouble yourself," added the doctor. "Pneumonia, I should judge. Say, three or four years ago."

This was all true and this thoroughly intelligent man placed himself in the charlatan's care, for the modern fakir "was magnified in his eyes," as was the weaver in the eyes of Galen. It was some time later that my friend found that an ex-insurance agent, who had taken his application for insurance but recently, was then employed as a "capper" for the charlatan and the secret of the "master specialists" keen insight was as an open book.

A Wisconsin physician, in a rather intemperate article in a current medical journal, states that quackery is necessary to the success of any physician, and he adds that charlatanry is practiced by perhaps ninety per cent of the regular medical profession. This is a decided exaggeration and yet, in a way, it comes in the broad classification of "near-truth." The so-called "snap diagnosis," which is so impressive to the patient and which too many physicians attempt, certainly has certain elements of quackery in it. It is a "grand-stand" practice which is entirely out of place in a learned and studious profession. Dr. Hobart Amory Hare, in the opening chapter of his excellent "Practical Diagnosis,"* gives quite a list of the ear-marks of disease, such as the weaver detected in the Jew's wife, and which are utilized by some medical men and are employed extensively by quacks of the present day.

As suggested by Dr. Walsh,** this story of the weaver may have been in circulation as far back as the fifth century before Christ—of course with another physican than Galen as its learned doctor,—but the quack of today has much in common with the ancient weaver of the "Arabian Nights." Both enter the practice of medicine to make money or gratify some worldly ambition; both aspire to nothing higher than a financially successful charlatanry; both are entirely out of sympathy with those high ideals which make real physicians; both utilize all available material to impress the people with their unusual skill, and both are clever enough to even deceive the wise men of their generation.

* "Practical Diagnosis," Philadelphia, 1896.
** Journal of the American Medical Association, Vol. 52, p. 856.

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### XI. IAN MACLAREN (JOHN WATSON) (1850-1909). A Doctor of the Old School.

THERE has been a great deal of purely sentimental literature created with the country doctor or the old-time doctor as its theme. In this day of what we choose to designate "exact scientific medicine," when we feel that we have successfully pitted the test-tube and the microscope against the individual, we are inclined to look with a sort of amused interest upon the pioneers in medicine. We take the old-timers rather sentimentally than seriously, and yet, when we look back upon

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the country doctor of a generation ago, and see what a rugged type of manhood he was, we feel that the common conception of him is perhaps at fault—for there was far less of poetry than of deadly earnestness in his make-up. It has been my privilege to know a few of the doctors of the old school—big, blunt, clean fellows—and I have always felt, in talking medicine with them, that there was fully as much sound logic and intellectuality employed in reaching their conclusions as in the more exact rule-and-figure methods of our own day. It has been contended, with a great deal of truth, that dependence upon the instruments of precision, which the past few years have given us, has rendered our power of observation less acute, our bedside technique less exact, our reasoning less sound and ourselves less self-reliant than were those older men who had little more than their five senses to aid them in fathoming the mysteries of disease.

And yet, it is fortunate that we are able to surround the doctors of the old school with a wreath of poetry and sentiment which will create a sympathetic interest in them on the part of the people, for there was never a group of men more worthy of public admiration than this. That the readers of the nation hold an entirely erroneous conception of these pioneers and bestow their affection upon purely imaginative conceptions of them, matters little. Many a man has had to be idealized by the pen, before he could become a popular idol, and why not the doctor of the old school.

For a number of years, Maclaren's "A Doctor of the Old School" remained upon my book-shelves entirely unread, so far as I was concerned. When I bought it, I imagined I should like it, but my impression was changed as, one after another of those who have cheered the old library with their presence, told me that I would find it a "sweet story." As I have said, I have known doctors of the old school and admired them for their rugged strength and I had no desire to have my recollections of them diluted with even the sweetest sentimentality.

But as I finally drifted into the pages of Watson's charming book, I was impressed that I had either viewed my old doctors very superficially and had thereby failed to see the beauties which lay beneath their rough exterior; or that Maclaren, by the cleverness of his pen and bigness of heart, had carried me away with his poetic conceptions,—and either way, I was satisfied. Whether the "Doctor of the Old School" is a revelation or a delicately woven illusion, matters little to me. I was a sympathetic reader and more than once my lashes were dampened with—well, there was no sentimental fiction in that moisture, at any rate.

But if I have been taken in by the poetic conception of this old Scotch physician, I have the satisfaction of knowing that a host of my fellow practitioners have likewise yielded to its charms. After the first editions of the book were published and Maclaren had received much of the praise his work merited, he wrote a preface to later editions in which he acknowledged the encouragement which had been given him by the doctors at home and abroad who had met his "Weelum Mac Lure," and in this preface he says: "It is surely more honor than a new writer could ever have deserved to receive the approbation of a profession whose character puts us all to shame."

Dr. Mac Lure had practiced in the Scotch village of Drumtochty for many years,—in Drumtochty where "the ordinary course of life, with fine air and contented minds, was to do a full share of work till seventy, and then to look after 'orra' jobs well into the eighties, and to 'slip awa' within sight of ninety.

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* * * It was impossible for a doctor to earn a most moderate competence from a people of such scandalous health, and so Mac Lure had annexed neighboring parishes. His house—little more than a cottage—stood on the roadside among the pines toward the head of the Glen, and from this base of operations he dominated the wild glen that broke the wall of the Grampians above Drumtochty—where the snow drifts were twelve feet deep in winter, and the only way of passage at times was the channel of the river—and the moorland district westwards till he came to the Dunleith sphere of influence, where there were four doctors and a hydropathic. Drumtochty in its length, which was eight miles, and in its breadth, which was four, lay in his hand; besides a glen behind, unknown to the world, which in the night time he visited at the risk of his life, for the way, thereto was across the bog moor with its peat holes and treacherous bogs. And he held the land eastwards toward Muirtown so far as Geordie, the Drumtochty post, traveled every day, and could carry word that the doctor was wanted. He did his best for the need of every man, woman and child in this wild, straggling district, year in, year out, in the snow and in the heat, in the dark and in the light, without rest, and without holiday for forty years."

Maclaren did not attempt to make Dr. Mac Lure personally attractive, nor did he even give him a gracious and pleasing presence in the sick room. Had he done either, he would have made his picture incredible and unacceptable. But without these graces, the sight of Mac Lure "put courage in sinking hearts."

"A tall, gaunt, loosely made man, without an ounce of superfluous flesh on his body, his face burned a dark brick color by constant exposure to the weather, red hair and a beard turning grey, honest blue eyes that look you ever in the face, huge hands with wrist bones like the shank of a ham, and a voice that hurled his salutations across two fields, he suggested the moor rather than the drawing room." Such was the Doctor of the Old School. "He was ill pitten thegither, to begin with, but many of his physical defects were the penalties of his work, and endeared him to the glen."

In two instances, Maclaren permits his poetic conception to carry him a trifle far. In two things, Dr. Mac Lure and his story are made a trifle unreal. Did we not know this rugged type of country doctors so well, we might believe that those big, rough ungainly hands were as "delicate as a woman's" in surgical operations. But having seen him at his work so often, we know that Mac Lure was, in all probability, exceedingly awkward in his operating and very crude in his surgical technique. There is a very common popular impression that the good surgeon must have an exceedingly delicate touch and an iron nerve—that his hand must be firm and free from the slightest tremor. We have often read of the surgical operation in which the deviation of the blade, even a hair's breadth, would result in the patient's death. As a matter of fact, the knife is used but little in an ordinary operation and where it is employed, its deviation even so much as a half-inch, would usually amount to nothing. Many distinguished operators are exceedingly nervous, and the greatest surgeon I have ever known—and perhaps the greatest America has ever seen—was so awkward in his work that he lost the index finger of both his hands. And yet, after the loss of these useful members, his operating was not noted to be any the less graceful or effective. If Maclaren had pictured Dr. Mac Lure as a fearless operator, when occasion demanded it; but rough and clumsy in his work, we should have liked the description better. The rugged, hard life of the country doctor, which renders the hands rough, coarse, stiff and knotted is not conducive to a velvet touch.

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And Maclaren stretches our belief to the point of breaking when he gives way to his sentimentality in reference to the old doctor's horse, who died the week after her master. To be sure, the old white mare might have died immediately after the doctor—or six months before or five years after—a white mare must die some time; but this coincidence in the death of horse and rider might be the more patiently tolerated in Maclaren, if it was not a bit sentimental fiction worn threadbare by other writers. The manner of Mac Lure's riding, however, we find far more acceptable:

> "It was not that he rode beautifully, for he broke every canon of art, flying with his arms, stooping till he seemed to be speaking into Jesse's ears, and rising in the saddle beyond all necessity. But he could rise earlier, stay longer in the saddle, and had a firmer grip with his knees than anyone I ever met, and it was all for mercy's sake. * * * Before and behind his saddle were strapped the instruments and the medicines the doctor might want, for he never knew what was before him. There were no specialists in Drumtochty, so this man had to do everything as best he could, and as quickly. He was chest doctor and doctor for every other organ as well; he was accoucher and surgeon; he was oculist and aurist; he was dentist and chloroformist, besides being chemist and druggist."

If clothes make the man, the garments worn by Dr. Mac Lure had produced a rough, uncouth individual. His clothing befitted well the man.

> "Black he wore once a year, on Sacrament Sunday, and, if possible, at a funeral; topcoat or waterproof never. His jacket and waistcoat were rough homespun of Glen Urtach wool, which threw off the wet like a duck's back, and below he was clad in shepherd's tartan trousers, which disappeared into unpolished riding boots. His shirt was grey flannel, and he was uncertain about a collar, but certain as to a tie, which he never had, his beard doing instead, and his hat was soft felt of four colors and seven different shapes."

The center of local interest, however, so far as the doctor's clothing was concerned, lay in his trousers, one faction contending that he had worn the "edentical pair the last twenty year," a fact evidenced by his "gettin' a tear ahint" the mend of which was still "veesible." Others held that he got a "wab o' claith" and had a new pair of trousers made every two years, but kept the new garments in the garden to wear the new off, before wearing them.

> "'For ma ain pairt,'" Soutar used to declare, 'a' canna mak up my mind, but there's ae thing sure, the Glen wud not like tae see him withoot them; it wud be a shock tae confidence. There's no muckle o' the check left, but ye can aye tell it, and when ye see thae breeks comin' in ye ken that if human pooer can save yir bairn's life it 'ill be dune.'"

It was a beloved doctor indeed the pattern of whose trousers gave new hope to the sick and the afflicted! But interesting and important as the doctor's clothing may have been to the people of the Glen, there are other things which are more worthy of our attention.

There was no question as to Dr. Mac Lure's school of practice. He was certainly a doctor of "the old school" and he relied upon but a few remedies, and they were of the kind that there was speculation as to their results. Mrs. Macfayden said of his methods of treatment:

> "'He aye can tell what's wrang wi' a body, an' maistly he can put

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ye richt, and there's nae new-fangled wys wi' him; a blister for the oot-side an' Epsom salts for the inside dis his wark, an' they say there's no an herb on the hills he disna ken.'"

Like most of those sturdy and rugged old physicians, Mac Lure was utterly intolerant of those methods of practice which he himself had not chosen to follow. He had ordered castor oil for a youngster who had eaten too many gooseberries and the child's father, who was a newcomer, had objected to the remedy and had produced a case of homeopathic granules, to be used instead. The doctor looked over the little vials with this comment:

"'Belladonna; did ye ever hear the like? Aconite; it cowes a'. What next? Nux vomica. Weel, ma mannie, it's a fine ploy, and ye 'ill better gang on wi' the Nux till it's dune, and gie him ony ither o' the sweeties he fancies. * * * A'm no wantin' yir fees, man; wi' that boxy ye dinna need a doctor; na, na, gie yir siller tae some puir body, Master Hopps."

It is hard to tell in just what part of the story we like Dr. Mac Lure best; but at no time does he win the sympathy of the physician so completely as the morning after Saunders was rescued from death. Saunders was ill of some fever and a London doctor, who chanced to come by the place on a hunting trip, had said that the poor fellow would not last through the night. Then Mac Lure was sent for and with him came his old friend, Drumsheugh, and these two men fought against death during the entire night. On toward morning, a crisis came and Saunders began to mend rapidly. The night had been a hard one, and with early sunlight, Drumsheugh and the doctor had gone out for a walk.

"There they came to a halt, and Doctor Mac Lure for once allowed himself to go. His coat he flung east and his waistcoat west, as far as he could hurl them, and it is plain he would have shouted had he been a complete mile from the Saunders home. * * * He struck Drumsheugh a mighty blow that well-nigh levelled that substantial man in the dust, and then the doctor of Drumtochty issued his bulletin:

"'Saunders wesna tae live through the nicht, but he's libin' this meenut, an' like to live. He's got by the warst clean and fair, and wi' him that's as good as cure.* * * There's nae use glowerin' at me, Drumsheugh, for a body's daft at a time, an' a' canna contain masel' and a'm no gaein' tae try.' Then it dawned on Drumsheugh that the doctor was attempting the Highland fling."

Every doctor who has experienced a hand-to-hand conflict with death and who has piloted some sufferer from the shadow of the grave back to health, will appreciate that exhuberance of spirit which prompted the old doctor to finish up a night of hard, unceasing toil with a Highland fling on the hillside. Every doctor will sympathize in that great satisfaction which came to Mac Lure when he had brought success out of conditions which the great London doctor had declared to be hopeless.

The following Sunday, as the good, straight-laced Scots people came from their church, they saw the old doctor cantering along on Jess, and then and there, on the Sabbath day, went up a mighty cheer, "Hurrah! Hurrah! God bless you, doctor, and well done!"—and the parson joined with the people shouting lustily.

"It was two miles before Jess composed her mind, and the doctor and she could discuss it quietly together.

"'A' can hardly believe ma ears, Jess, an' the Sabbath tae; their verra jidgment hes gane frae the fouk o' Drumtochty. They've heard

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about Saunders, a'm thinkin', wumman, and they're pleased we brocht him roond; he's fairly on the mend, ye ken, noo. A' never expeckit the like o' this, though, and it wes juist a wee thingie mair than a' cud hae stude. Ye hev yir share in't tae, lass; we've hed mony a hard nicht and day thegither, an' yon wes oor reward. No mony men in this warld 'ill ever get a better, for it came frae the hert o' honest fouk.'"

And it was a great reward—such a reward as any honest doctor would appreciate far above money or what money can buy.

It is no wonder the people of Drumtochty loved the old man; nor is it surprising that we readily share their affection. We are drawn to him closely when we hear him console the husband of a patient for whom there is no hope of recovery.

"Ye needna plead wi' me, Tammas, to dae the best a' can for yir wife. Man, a' kent her lang afore ye ever luved her; a' brocht her intae the warld, and a' saw her through the fever when she was a bit lassikie; a' closed her mither's een, and it was me hed tae tell her she wes an orphan, an' nae man wes better pleased when she got a gude husband, and a' helpit her wi' her fower bairns. * * * Div ye think a' wudna save Annie if I cud? * * * Tammas, ma puir fallow, if it could avail, a' tell ye a' wud lay doon this auld worn-oot ruckle o' a body o' mine juist tae see ye baith sittin' at the fireside, an' the bairns roond ye, couthy an' canty again; but it's no tae be, Tammas, it's no tae be.'

"When a' lookit at the doctor's face," Marget said, "a' thocht him the winsomest man a' ever saw. He was transfigured that night, for a'm judging there's nae transfiguration like luve."

As I have said, if "The Doctor of the Old School" is merely a bit of fanciful and sentimental fiction; I am glad to have been brought under the spell of Maclaren's magic; if it is the true conception of the old-time country doctor, I am glad that Maclaren has opened my eyes to the poetry and sentiment in their existence. I feel about Dr. Mac Lure as Sir George, "the Queen's ain surgeon," did, when that great physician had spent a day with the old man at Drumtochty. As I leave the doctor of the old school now, I feel like grasping his rough hand and looking him in the eye and saying, with Sir George: "A'm prood tae hae met ye. Yir an honor tae oor profession."

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# BOOK REVIEWS.

DIAGNOSTIC AND THERAPEUTIC TECHNIC. By Albert S. Morrow, M. D., Adjunct Professor of Surgery, New York Polyclinic. Octavo of 850 pages, with 815 original line drawings. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $5.00 net.

The past ten years have witnessed numerous and important additions to diagnostic and therapeutic resource. Of these the general practitioner, who graduated previous to the last decade and has been in busy practice ever since, has been pretty well informed, so far as their general principles and nature are concerned, through the medium of the medical journal and the text book revisions. But it is undoubtedly true that many a physician in the field of practice has been hindered from availing himself of several of the newer diagnostic and therapeutic measures because he has never been properly instructed in the technique of their application. This part of the matter has, we fear, been too much taken for granted. Hence we welcome this book of Dr. Morrow's, which has gathered together in one concise volume all of the more modern procedures of diagnosis and treatment, and given clear and practical instructions for their performance. We believe that the general practitioner who for various reasons cannot make periodic journeys to medical centres for post-graduate courses will hail this book as filling a real need. Even supposing that the procedures in question are described, as to their technique, in the various text-books, it is much more convenient and helpful to have them all collected, from the standpoint of technique, in one place and between two covers. Technique is an important and legitimate branch of medical practice, and is entitled to a separate exposition, just as every other art and profession demands its working manual.

BRIGHT'S DISEASE (The Anatomical Histological Processes). The Anatomic Histological Processes of Bright's Disease. By Horst Oertel, M. D., Director of the Russell Sage Institute of Pathology, New York. Octavo of 227 pages, with 44 illustrations and 6 lithographic plates. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $5.00 net.

It is high time that the history of Bright's Disease was written from all the standpoints of modern medical science, to the end, if possible, that out of all the complementary viewpoints, some clearer and more helpful ideas may be gained for its prevention and treatment. There can be no sort of question that our knowledge of this disease, so far as the ultimate ends and aims of medical knowledge are concerned, is far behind the status of medical science in general. It is one of the citadels which, thus far, we have stormed in vain, and have to admit repulsion, if not defeat. Hence, as we have said, it is high time to marshall our forces, and pass them in review, and see if, out of such a marshalling and review, we cannot devise some more successful plan of attack. Here is, in this book of Oertel's, a presentation of one side of the subject with which, at least, no fault can be found. The pathologist has had all the best of the matter in respect of this disease; naturally so, of course, because he deals with end-results of disease processes, and not with functional beginnings, which are much more elusive and hard to nail. Nevertheless, a comprehensive, accurate, and well-arranged presentation of the pathology and histology of Bright's disease, such as Dr. Oertel has given us, ought to go a long way toward illumining the problem.

PRACTICAL TREATMENT. Volume II. A Handbook of Practical Treatment. In three volumes. By 78 eminent spe-

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cialists. Edited by John H. Musser, M. D., Professor of Clinical Medicine, University of Pennsylvania; and A. O. J. Kelly, M. D., Assistant Professor of Medicine, University of Pennsylvania. Volume II. Octavo of 865 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1911. Per volume: Cloth, $6.00 net; Half Morocco, $7.50 net.

What with the Osler series, and the Allbut series, and now the Musser-Kelly series, we are generously supplied these days with systems of the practice of medicine. No matter. Let them come, as long as they all measure up to the standard of the three we have mentioned. The more of such publications the merrier. There is room for them all, and each fulfills a mission of its own. It is a splendid idea—one of the products of modern wisdom—to collate a practice of medicine from various sources and authorities. It ensures a much more vital, to say nothing of a more adequate, treatment of each branch of medicine than under the old cut-and-dried method of one man writing them all. One of the distinctive features of the Musser-Kelly series is its comprehensiveness and brevity. It is to be complete in three volumes—but they are a multum in parvo. Every separate volume is chuck full of meat. The comparative shortness of the series testifies, not to any scamping or inadequacy in the contents, but to the high editorial ability of the men who brought it forth. We cannot help wondering (for we know something of such editorial work) how much pruning and trimming these editors had to do to put so much in such space!

MODERN OTOLOGY. Second Edition Revised. The Principles and Practice of Modern Otology. By John F. Barnhill, M. D., Professor of Otology, Laryngology, and Rhinology, Indiana University School of Medicine; and Ernest de W. Wales, B. S., M. D., Clinical Professor of Otology, Laryngology and Rhinology, Indiana University School of Medicine. Second edition revised. Octavo of 598 pages, with 305 original illustrations, many in colors. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $5.50; Half Morocco, $7.00 net.

Primarily, of course, this book is one for the specialist in diseases of the ear. A volume of six hundred pages, devoted to one organ of the body, and that an organ with which the general practitioner is neither very familiar nor very concerned, can hardly be looked upon as being addressed to the rank and file of the profession. So far as our own hazy knowledge of otology will permit us to judge, Dr. Barnhill's work is adequate to every contingency, even from the point of view of the specialist. For the general practitioner, as intimated, it is much more than sufficient. Yet it has an interest for the latter, too. For, if the physician wishes to know something about diseases of the ear and expects to treat even a few of the simpler conditions of that organ, it is better, even for that limited purpose, that he get his information at first hand from a reputable authority on the subject, rather than to rely upon picked up knowledge, or upon hastily written books by men who do not know much more than the reader. Whatever is worth doing at all is worth doing well, and the same principle applies to the writing and reading of books. Even for an elementary knowledge, it is best to go to a master.



We may also, I think, fairly expect to obtain a series of remedies which will act upon the spinal cord, in such a way as to enable us to treat with success a number of diseases which are at present almost altogether beyond the reach of our remedies. Our prospects of doing this are all the more hopeful, inasmuch as the introduction of antipyrin and other new remedies has already enabled us to relieve the pains occurring in some spinal diseases more efficiently than we were able to do before.

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# The Medical Brief

A MONTHLY JOURNAL OF PRACTICAL MEDICINE.

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## EDITORIALS.

### STATE SICK INSURANCE

GREAT BRITAIN is pushing the idea of State medicine with a vengeance. The National insurance scheme introduced by Mr. Lloyd George into Parliament last May contemplates a huge plan of compulsory insurance against sickness which is as daring in its conception as it seems to be promising in its practicability. And it appears to meet with the enthusiastic approval of the country in general, including both the public and the medical profession. Of course there will be the usual amount of objection on the ground of interference with personal liberty. Nobody should be compelled to receive or to pay for medical attention that he does not want; any man should be free to be sick and die without help if he wants to; and all that sort of thing. But such sentiment is fast waning among civilized communities, and co-operation is the order of the day. There are even people in this country who may still be heard to complain about compulsory education, grumbling that if one wants to be ignorant he ought to be allowed to be ignorant, and certainly ought not to be compelled to pay for education that he neither values nor wants. But no one pays any serious attention to such complaints; and apparently no serious opposition is being felt or expressed to Mr. Lloyd George's national insurance scheme.

The truth is, of course, that the furnishment of medical service, while it is naturally of great importance from the viewpoint of the profession, is by no means the largest feature of the plan. Of much greater importance to the ordinary man is the provision for sick benefit in the way of income during the period of illness. In short, it is a proposition for the nation to go into the insurance business, with the element of compulsion added in order to insure the success and the greatest possible benefit of the enterprise. It also carries with it a most commendable plan for a big co-operative campaign by the State and the medical profession against the ravages of tuberculosis, with a capital of seven and a half million dollars as a starter with which to build a chain of sanataria to be established throughout the country.

We have not yet seen the actual text of the bill, as it has not yet been published, but from the very full and detailed accounts of the plan which have been promulgated from responsible sources, we do not see how the medical profession of Great Britain can fail to give it their hearty support, both from a personal and a public standpoint; for, with the characteristic practicality and hard sense of British statesmanship, the scheme is based, not upon a high-falutin appeal to sentiment or paternalism, but upon the rational ground of economic advantage to all the parties

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at interest. As Mr. Lloyd George points out, under the present system millions of people get medical service either at the expense of their children's food or at the expense of good-natured doctors—usually at the latter. What this bill proposes is that when any of these millions falls ill he can command the services of a competent doctor with the knowledge that he can pay—not only that, but the doctor whose services he obtains knows when he goes that he will be adequately paid.

Another wise and far-sighted provision of the bill is the separation of the offices of physician and druggist. This provision looks with equal shrewdness to the advantage of both patient and doctor. As the author of the measure points out, a patient, so long as he gets something that looks like medicine, is neither able nor concerned to know whether it is good medicine or not; hence there must be no inducement for an underpaid doctor to take it out in drugs. On the other hand, a conscientious doctor cannot possibly afford to give the more expensive drugs gratis with his services, yet he knows that some of these high-priced drugs are often essential to a cure.

Aside from what looks to us like the broad statesmanship and exceeding practicability of this particular scheme, we believe, and have always believed, that of all the enterprises which offer a legitimate and eminently practicable field for the exercise of governmental paternalism, the insurance business is the most satisfactory and promising. We are considerably surprised that, with all its leaning toward public functionation, the government of this country has never proposed to go into the insurance business—the one type of public service for which, outside of its regular office, it is, as we think, most fitted. Insurance against both sickness and death could be furnished by the government much more cheaply and guaranteed much more securely than by any private company, however large or wealthy; the conduct of the business involves no fussy interference with private enterprise, such as its competition in railroading, or coal mining, or similar undertakings might involve; and the trusteeship of the money paid in assessments would furnish the government with a large fund of money for its own legitimate use at a comparatively low rate of interest, subscribed by the public in the ordinary course of their domestic economy. From this standpoint, no less than from one of economic advantage to the parties at interest, we are of opinion that Mr. Lloyd George's national insurance scheme is a piece of sound statesmanship which deserves the fullest degree of success, and which this country would do well to emulate.

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## THE REAL CRUX OF DRUG PROVING

IN THE patent office at Washington there repose hundreds of volumes containing the records and descriptions of inventions which as many ingenious minds have from time to time devised, and details of the uses to which these devices have been intended by their inventors. Possibly all of them have more or less merit; but by no means all of them are in use. And no one dreams of going to the patent office in Washington to ascertain which are the practical and successful inventions of the century. The successful patents are before our eyes, in the usages and practices of every-day life. They have "made good", and are attested, not by virtue of their entry in the patent records, or even by their endorsement by expert test, but by virtue of their adoption and proof in general experience, either among the public at large or among the working ranks of the craft to which they pertain.

Much the same reflection might well be applied to the matter of drug proving.

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After all, what do expert reports and Councils on Pharmacy and Chemistry amount to, in the valuation of therapeutic agencies, except to enter them upon the records? And how many of our most permanent and widely valued remedies have got upon the record—or been stricken from them, for that matter—by that medium? Is not the ultimate test, after all, as in the case of patents and inventions, the proving and adoption of the remedy by the working contingent of the profession—by the great rank and file of the profession? Medicine differs in no respect from every other department of labor; values are determined by results, and results are attested by the sum of working experience.

The expert and the research man, the faculty and the council, have their functions, to be sure, in therapeutic acquisition. But in this, as in all matters pertaining to medicine, the practitioner is the court of last resort. Until his majority voice has been heard, no authentic decision has been reached; and from that decision, once unmistakably rendered, there is no appeal.

* * *

## THE SURGEON'S DUTY TOWARD ELECTRO-THERAPY

ELSEWHERE in this issue we publish an abstract of a paper written by Dr. Sinclair Tousey, a specialist in electro-therapy, calling attention in a very strong and impassioned manner to the obligation resting upon the present-day surgeon to avail himself of the assistance of the X-ray in the pre-operative and post-operative treatment of cancer and similar surgical conditions. Dr. Tousey shows, by a very powerful presentation of facts, that the use of the X-ray before and after the knife in these conditions frequently means just the difference between hopeless recurrence and successful extermination, and he makes no bones about charging the surgeon who wilfully neglects this aid to his surgical treatment with criminal negligence.

This journal holds no brief for the X-ray, or for any of the forms of electro-therapy. It has no partial interest in any one form of therapy over another. It is concerned equally with all those agencies which make for the cure and alleviation of disease by rational procedures. But we feel constrained to add our editorial voice to the plea made by Dr. Tousey for a more consistent attitude on the part of our modern surgeons toward the electrical modes of treatment. So long as electro-therapy was in the trial stage, an indeterminate measure, it was all well enough for established medicine and surgery, especially the latter, to withhold judgment and to play a waiting game in regard to it. But there can hardly be any more doubt in the mind of a reasonable man as to the value of the X-ray and the electrical currents—certainly not in the case of the X-ray, and we do not think in the case of the currents. The evidence is indisputable, both in its quantity and its quality, and can no longer be disregarded.

Why, then, does the surgeon continue to maintain such a skeptical and obstinate position in the matter? If these modes of treatment have proven themselves, to any extent, then it is decidedly the duty of the surgeon to give his surgical patients the full benefit of their employment. No one pretends—least of all the men who have made the subject their painstaking life-study—that any of the electrical modes of treatment have superseded or replaced the knife in the eradication of malignant growths or tuberculosis infiltrations. But if, as Dr. Tousey asserts, and as the overwhelming evidence in the case demonstrates, the use of electricity before and after operation adds a large percentage of probability to the cure—we are putting it in its mildest aspect—then we agree with him that to refuse or neglect, from whatever

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reasons, to avail himself of that added percentage subjects the surgeon to an unpleasant charge of criminal negligence. Let our surgeons look to it.

* * *

## THE DOCTOR'S LEISURE HOUR

ONE of the penalties of modern specialism—we are not now speaking of medical specialism, but of that division of the world's labor of which medicine is itself a conspicuous example—is that it deprives the individual very largely of those channels of culture and recreation which he enjoyed under the less exacting conditions of earlier times.

No class of men feel this deprivation more conspicuously than the scientist, among whom the modern physician is a prominent instance, and in no direction does it affect him more noticeably than in his relations to general literature. The doctor is, as a rule, a reading individual, who delights to browse among the literature of his own and other ages, but under the present strenuous conditions that surround him he cannot indulge these tastes to any great extent. He is exceedingly busy; there is so much of his own technical literature to be digested if he would keep up with the times; he cannot, in many cases, afford to keep his book shelves stocked with general literature, and would not have much opportunity to peruse it if he did. And so he gradually drifts into a spirit of lethargy and neglect in the matter of general reading, and all that he ever read of that character begins to slip away from him.

The literary periodicals of the day, realizing this situation, seek to meet it by serving out an ephemeral style of reading to be snatched on the run, like the quick lunch. But it does not serve the purpose or satisfy the reader's longings—it only gives him mental dyspepsia, as the quick lunch gives him physical indigestion. What the busy man craves is the opportunity, now and then, of sitting down over the walnuts and wine, of spending a quiet hour, culled from the busy day, with one of the old or new masters of literature, and of refreshing his inner man from their exhaustless and satisfying store. But by the time he has hunted up the volume, or has run down to the library for it, the opportunity has passed.

It has been with a view of ministering to this human and esthetic part of the doctor's nature that we have been serving him up, from month to month, during the past year, the interesting and classical essays from the pen of a literary member of the profession, which have appeared under the heading of "Some Doctors of Fiction", by Dr. George Thomas Palmer. The enjoyment with which these inimitable sketches have been devoured by our readers has been made evident to us in numerous expressions of their gratification, and every one will be sorry to learn that the series has now come to an end—unless, indeed, we can succeed in persuading Dr. Palmer to extend them, as we shall endeavor to do.

However, the course that these essays have marked out for us must and will be followed out. We shall continue to serve up to our readers from month to month some of the old-time masterpieces that he has laid aside in his busy career, and some, too, of the current examples of wit, pathos, and human interest which we take to be worthy of reproduction. The reading of this journal itself argues that the reader has a little leisure time for reading—how much he himself does not know, as he may be called away at any moment. But while it lasts he shall have the opportunity not only of adding to his store of "shop" knowledge, but of delighting and recreating his mind with a little of the good things of general literature, which the doctor enjoys just as much as any man.

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# Non-Operative Treatment of Certain Tumors.

By A. O. Zwick, B. L. S., Ph. G., M. D.

Professor of Materia Medica and Pharmacognosy in the Cincinnati College of Pharmacy.

IT IS both interesting and useful, to practitioner and patient, to know that the treatment of certain forms of tumor without resort to the knife is not the exclusive practice of quacks and charlatans. Not many months ago we published a paper from a reputable surgeon describing an escharotic method of treating certain types of inoperable cancer, which he had employed with gratifying success. We now take pleasure in printing this article of Dr. Zwick's, advocating the use of a modification of the well-known Nauheim treatment for certain muscular tumors of the female pelvis. We confess that to us this opens a new field; we should welcome reports from others in regard to it.

Many muscular tumors in the female are due, in part at least, to congestion; an impediment in the circulation of a product in the changes in the heart and uterus. These tumors can, therefore, be beneficially influenced by treatment of these organs in such a way as to equalize the distribution and circulation and reduce the congestion. We know that this can be done by alkaline and saline medical waters, carbonated, such as the Nauheim treatment. Through prolonged treatment of this kind there can be no doubt that such growths have been beneficially influenced in-so-far as the size is concerned. Through the removal of the pressure under the tumefaction the size is mechanically reduced and chemically changed through calcification. This fact has been established beyond a doubt and many authorities could be quoted as to the effect of this treatment. Hence in young strong women where there is no need for immediate operative interference, this treatment is advised for various symptoms, such as pressure symptoms, etc. It is a well known fact that when the growth reaches the height of the umbilicus the venous stasis interferes with the heart's action such as to make operative interference necessary. In these cases the treatment mentioned is indicated, is often of great benefit, and should certainly be tried before operation. In these cases a rigid Nauheim treatment, which can be taken in any home or office properly equipped with bathtub (and carbonic acid gas can be produced by means of chemicals) should be instituted. The bath should be preceded by a thorough massage which aids in the proper distribution and equalization of the circulation, and followed by a rest of from one to two hours in bed. The various carbonated mineral waters are used in connection with the bath and mechanical treatment, with such medication as may be indicated, usually a little strychnine for the nervous system, or bromides according to the indications, being of value, and a strictly regulated diet being given the patient arranged in such a manner that the dry foods predominate. The local effect of such treatment being of course manifested on the growth and toward the organism as a whole.

As is well known the regular Nauheim course covers from four to seven weeks depending upon the progress made by the patient, the stage of the growth and the general result achieved. Usually there are twenty-one treatments to the regular course as given in Nauheim; the writer in his practice extending this usually to twenty-four baths. The effect

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of the early carbonated baths is much more promptly manifested. These baths are given intermittently, arranged somewhat according to the convenience of the patient so as to interfere as little as possible with the routine. These baths can be given three in succession on successive days and then a day or two of rest allowed to intervene, and another three in succession, etc. It has also worked very well in the writer's experience to give the baths on alternate days.

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## APPENDICITIS AND MASTOIDITIS: AN ANALOGY.

E. E. Clark, in the *Medical Fortnightly,* draws an analogy between mastoiditis and appendicitis as to possible sudden development, great danger to life, management, results and the attitude toward the two by some physicians and the laity.

Nearly all physicians as well as a large per cent of the laity are quite cognizant of the dangers of appendicitis and the one advises operation soon as the diagnosis is made and the patient and friends act on the advise with but little hesitation. How about mastoiditis? It is even more dangerous to life than appendicitis. No large per cent of them would recover without operation, and early operation is far less dangerous; too often in mastoiditis we find the individual, parents or friends begging to wait a few days. What may a few days mean? In appendicitis it may mean rupture into the peritoneal cavity, peritonitis and death. In mastoiditis it may mean invading the cerebral meninges with meningitis, brain abcess, or thrombosis of lateral sinus and death.

Many cases of appendicitis would get well without operation, but what one of us cares to take the chance of being the one to have a perforation, peritonitis and the black robed gentleman saying nice things about us and dear friends rushing to the florist to get the choicest and best?

The same, exactly, is to be said about mastoiditis and it is up to the family physician to educate the people to the point of seeing as great or greater danger in mastoiditis as in appendicitis.

Ear specialists throughout the world are urging the family consultant to help in the education of the laity to the great danger of pus in the middle ear and mastoid cells. Thirty per cent of the brain abcess cases are the result of suppurating ears. It is the old chronic ear that is the most dangerous. Most cases of meningitis is the result of extension of infection from the middle ear to the meninges.

People do not hesitate to be operated on for chronic appendicitis. Chronic appendicitis is no more dangerous than the old chronic discharging ear. Yet how seldom will you find a person who will submit to a radical mastoid operation until the danger signal is already out. There is no more conservative operation in surgery than the radical mastoid. Every case operated will be free from future danger of intracranial complications and 95 per cent will have dry ears.

In the last six successive cases of mastoiditis the author has operated the bony necrosis had exposed the membranous lateral sinus or dura to a greater or less extent. What does this mean? That some one has been responsible for causing delay in having the operation.

It would be almost impossible to find a general surgeon who could say that his last six cases of acute appendicitis had ruptured when the cases came to operation.

In these six cases of mastoiditis it is quite likely that a few days more delay would have meant thrombosis or meningitis and death.

Six successive cases like these the author believes should make us think and also see more distinctly both sides of this analogy.

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# Subnormal Temperature.

By W. T. Marrs, M. D., Peoria, Ills.

THIS is a subject which is rarely and meagrely treated of in medical literature, either permanent or transient, text-books or journals. Yet it cannot be said to be a rare condition, or an unimportant one. Subnormal temperature has at least as profound a significance as fever; possibly more so. Especially in certain diseases is it of great diagnostic and prognostic value, such as tuberculosis, anemia, neurasthenia. These values are here discussed by Dr. Marrs in a plain, practical way, their significance explained, and the treatment of such conditions outlined. A peculiar interest is given to the subject by the fact that the author draws many of his conclusions from what he calls "a recent hand-to-hand experience" of his own, from which, we rejoice to say, he has come out victorious, with renewed health.

The laity fear fever and when it exists are very anxious to have it reduced. Elevation of temperature is looked upon as a foe and seldom as a friend. It is probable, however, that in many cases fever is conservative and nature's expedite manner of removing toxines and deleterious products from the body. Fever *per se* is not dangerous as a rule, but is simply a signal of perverted function somewhere. It is the etiological factors that should enlist our attention that we may, to employ a bromidic term, "remove the cause."

But what about subnormal temperature? The laity never think of it and we seldom give it the diagnostic attention that we should. When one has a temperature of a degree or two below normal we are inclined to think the case will pass from our hands to the family undertaker in a short time. And still if we would only take the trouble to test for subnormal temperature we would find that it is a condition that exists oftener than we think. An early temperature in the morning of a degree or fraction of a degree below normal is one of the important diagnostic signs of incipient tuberculosis. This is as important, or more so, than the evening temperature, night sweats, etc. The low temperature is likely to be manifested before the other strong clinical symptoms are in evidence.

There are numerous pathological states upon which low temperature depends. Alterations in the red corpuscle ratio, diminishment of the hemoglobinic element, splenic perversion, general malnutrition and anomalous states of nerve cells and ganglionic centers may account for it. Metabolism is out of gear somewhere when it occurs and speaking more from a practical standpoint the individual is below par in nutrition.

These thoughts have been impressed upon me because of a little recent hand-to-hand experience in which I assumed the humble role of IT. About the middle of March my health got below par with loss of appetite and weight, cough, sore throat, etc. By the first of April all my symptoms were much accentuated; severe cough with great expectoration of thick mucus, no appetite, pallor, weakness, diurnal fever and night sweats. I thought, of course, that I had a tubercular infection, as medical men are always doubly introspective and over-rate their own symptoms. Still mine were bad enough, although no chest lesion was in evidence and exam-

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ination of the sputum revealed no tubercule bacilli.

After being in bed a couple of weeks with a forced diet of cream and raw eggs convalescence set in. While yet in bed I noticed that my morning temperature was very low and this was to me a matter of more concern than the afternoon elevation. For a couple of weeks my forenoon temperature was below normal. I took my temperature at frequent intervals, having nothing else in particular to do. The first reading in the morning about six o'clock would be 97 and it would take until about noon for it to crawl up to 98. Usually in the afternoon it was normal. All this was occurring after the fever was gone. Several times my morning temperature was below 97. Hot coffee and brandy with hot applications to my feet would usually raise my temperature a degree in a few minutes. I did not feel extremely weak when my temperature was at its lowest, i. e., after I was able to be out of bed. I could always tell, however, when my temperature was subnormal by a physical and mental apathy that would be difficult to explain. Facetious friends suggested that perhaps I was dead and didn't know it. An unusual pallor and chalky appearance of my skin was manifest and this had been coming on for some time. My pulse was fifty and sixty when the temperature was low. A blood count at the time would perhaps have settled some fine points in diagnosis, but I had no desire for it. It could not have been of any value so far as treatment was concerned and I thought what's the use? Doctors and other folks ought to know enough about their cases when they are sick, but never too much.

My treatment has been rest and nourishment. Drugs did not seem particularly indicated in my case. About the only medicine I took was calomel and castor oil; also a few grains of quinine each forenoon. My symptoms have all subsided and I am again back about to my normal condition of health. I have quit sucking the thermometer, as I think my temperature is behaving quite well.

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## CELLULOSE TEST FOR GASTRIC ULCER.

Soper, in the *Archives of Diagnosis,* describes the "cellulose test" as consisting in making a deliberate attempt to cause occult bleeding for the purpose of diagnosis by feeding a diet rich in coarse vegetable fiber. Raw cabbage, sauerkraut, radishes, celery, pickles, string beans, etc., are selected. Eggs and milk are permitted, but all meats and meat soups are prohibited.

The guaiac-turpentine test was used. (For details of same consult Osler's Modern Medicine, Boas or Elsner's textbooks or White's admirable article.)

*a.* The diet was continued for a period of three days before the test was made.

*b.* When the reaction was positive, the feces were examined microscopically for muscle fibers, as a control; if present the reaction was disregarded.

*c.* The feces were passed through the sieve to determine that a sufficient amount of vegetable fiber was consumed by the patient.

In order to illustrate the clinical results, a table is herewith presented, setting forth the comparative value of the test. Ten cases of latent ulcer, in which the diagnosis was made by means of the test, are contrasted with ten non-ulcer cases whose symptomatology is suggestive of ulcer.

In addition to the above recorded cases, the diagnosis in over two hundred cases of functional gastric disorders, gastritis, gall stones, etc., was confirmed by negative reactions following the cellulose test.

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# Important Considerations in Treatment

By J. A. Burnett, M. D., Gans, Okla.

THE influence of the autonomic (commonly called the sympathetic) nerve system upon vital functions, and the part it plays in the induction of health and disease, are considerations which have received all too little attention in the education and practice of physicians. Its reflex responsibility for many obscure physical, and even pseudo-mental conditions is clearly pointed out and emphasized by the author of this very practical paper, and its relations to frequently-met conditions explained. Especial point is given to the relationship between certain nervous troubles and the irritation caused by preputial and anal tension, these conditions using up a large quantity of nerve energy. A careful study of Dr. Burnett's "pointers," and following out of his simple suggestion, may save the day in many an obstinate case.

The pointers that are very important to consider in the treatment of many chronic as well as acute diseases, and especially those that seem to resist the indicated remedy, that I wish to call attention to are those known in orificial surgery. The term orificial surgery is usually restricted to minor and major surgery of the rectum and anus, such as dilitation of the sphincter ani muscle removal of hemorrhoids, etc., and the breaking up of prejucial adhesions and circumcision in both sexes and the repair of lacerated perineum and lacerated os uteri and the various similar operations on these parts. At the present time, as well as for several years past, there has been a great tendency for young graduates as well as many old ones to specialize in surgery and the various branches of surgery. The eye, throat, appendix and, in fact, most all other branches of surgery has received more attention by both general practitioner and the specialist than orificial surgery. According to my judgment, there is no branch of surgery that is more often needed or that is capable of doing more good that is now neglected than that known as orificial surgery.

It is not my intention for this paper to be a treatise on orificial surgery, as that would require a good sized volume. It is my object to emphasize only a few pointers belonging to orificial surgery, namely, the necessity of rectal dilitation in cases of contracted sphincter ani muscle and the breaking up of perputial adhesions or circumcision of both sexes. There is no text book in print that is entirely devoted to orificial surgery. There was one by Dr. E. H. Pratt of Chicago, a homeœpathic physician, which is now out of print. We are in great need of a text book on orificial surgery written for the benefit of the general practitioner, as this is the class of physicians that need such information and is the class that could use it to the best advantage, and by it do the most good, which I will attempt to explain further on. Dr. E. H. Pratt said:

"Disturbance of the sympathetic nerves do not make themselves known in the language of pain greatly disturb the various functions of the body interfering seriously with its nutrition, but very readily escaping the notice of the careless observer."

It should be remembered that the sympathetic nervous system has control of the vital functions and pressure on the nerve endings in the sphincter ani mus-

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cle in the glans penis or glans clitoris causes various reflex disturbances which cannot be relieved only by relieving this pressure. These orificial pointers are not generally as well known as they should be, and many conditions are caused by such pressure that the average physician has completely overlooked and his treatment has failed to relieve because he has failed to locate and remove the cause. There are many cases of convulsions (so-called epilepsy) in children that can be relieved and permanently cured by breaking up adhesions of the glans penis or glans clitoris or by circumcision of either sex. It is a well-known fact that bromides will give temporary relief in such cases, as well as in most all cases of true epilepsy, when the patient is under their influence fully enough, but they rarely ever cure, as they do not remove the cause in any or many cases. In the treatment of all diseases the thing to do is to find the cause and then remove it when this can be done. Our knowledge of pathology and the various therapeutic methods does not always make this possible.

Recent researches in mechanical therapy have proved the great importance of understanding the nervous system.

Dr. C. E. Lanning said: "No matter from what standpoint we start, the nervous system is the all-important structure in curing or preventing disease."

The specialists in spinal therapy, vibratory therapy, thermo therapy, photo therapy, electro therapy and various other physiological methods of treatment have, in a great measure, neglected the importance of rectal dilitation and the breaking up of preputicial adhesions. The sympathetic nervous system can be aroused by dilitation of the sphincter ani muscle, and thereby all the vital functions that are impaired improved. It is a valuable therapeutic measure in chloroform narcosis, suspended animation from falls, drowning, fainting, smothering spells and various other things too numerous to mention. Dilitation of the sphincter ani muscle is a mechanical therapeutical measure, valuable not only in chronic diseases, but in acute diseases, and as an emergency remedy. It stands in mechanical or physiological therapy as a therapeutic measure similar in comparison as epinephrin as a therapeutic agent in drug therapy and has one advantage; that is, a physician can give the treatment at any time with his fingers in cases of emergency when no instrument or drug may not be at hand. I consider it very important to know the condition of the sphincter ani muscle and to relieve a contracted sphincter by dilitation.

Dr. S. H. Linn said: "I do not regard the examination of a case of insomnia, neuralgia, nervous prostration, general debility or functional derangement of any one or all organs of the body as thorough or complete without a careful exploration of the lower two or three inches of the rectum."

If all physicians would adopt Dr. Linn's plan with the addition of examinations for preputial adhesions and other orificial defects, they would more often locate the cause of the diseased condition.

Dr. Hoyt says: "How I wish I possessed sufficient command of language to paint in graphic colors all that is true regarding the beneficence of the apparently simple device of stretching the sphincter ani muscle. When this muscle loses its ordination, what a field of wickedness does it create. There are a multitude of discords of reflex actions directly attributable to it and relieved by the simple procedure of stretching the sphincter."

I was called to see a boy 6 years old that had been a "bed wetter" all his life. I found he had the longest prepuce I ever saw. It extended almost an inch

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beyond the end of the penis, which was an ordinary size. Another boy 3 years old that had been sick off and on all his life and subject to convulsions when he had much fever I found the prepuce just covering the glans, but contracted, and adhesions so complete that the meatus was about all that could be exposed. I treated a persistent diarrhœa in a boy about 3 years old and his brother about 5 years old for general debility who had been sickly all his life. The indicated remedies would give only temporary relief. I found both had a very long prepuce with prepucial adhesions. Another case, a married lady about 30 that had been having light convulsions for about four years, came for treatment. I was satisfied she had preputial adhesions and upon examination I found the clitoris completely hooded. I am thoroughly satisfied that preputial adhesions was one of the causes, if not the only cause, of all the trouble in these cases and that breaking up the adhesions and removing redendant tissue would be a part of the treatment, if not all that was needed. On examination of children of both sexes, I usually find preputial adhesions when they are undeveloped and do not grow as fast as they should or small to their age or lack of confidence have to be right with the mother all the time for protection or sick and puny off and on or a tendency to convulsions where feverish and various other things too numerous to mention.

Recently there has been a great deal said about the importance of a medical examination of the eyes, ears, nose and throat of school children, which is, in a measure, important, but I am unable to see why only eyes, ears, nose and throat should be selected and why they are of any more importance than any examination or for any other class of diseases except contagious diseases.

I fully believe that if the orificial specialists were placed on such examining school boards he would find as many physical defects that was causing as much trouble and needing attention as the ophthalmologist or any other specialist would find. But regardless of all the benefit that could be derived from orificial philosophy, this is an age of false modesty when this delicate subject could only be considered with the family physician or private specialist, and then it is not always accepted in the true light or appreciated by many seemingly intelligent people.

Again the school physician should not supplant the private family physician. I am not a socialist at present, but I can readily see that by evolution and after each legislation we are rapidly drifting that way, and if it keeps on the public physician with a job or an appointment will do all the practice for those of school age, 6 to 21. The county physicians will have charge of all contagious diseases which, according to bacteriology and the Oklahoma State Board of Health, includes pillagra, hook worm, infantile paralysis, typhoid fever, tuberculosis, puerporal sepsis, hydrophobia, measles, diphtheria, smallpox, scarlet fever and pneumonia (we are required to report the above named twelve diseases in Oklahoma), and will soon have most all others, as the list is being rapidly increased from time to time, and there will be nothing left for the physicians not in office to do.

The general practitioner should know the various derangements caused by preputial adhesions in children, for the specialist is rarely consulted in such cases, and in various communities no specialist is convenient and many are not able to pay the general practitioner's fee, much less a specialist's fee. It does not require a specialist to diagnose or

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relieve such conditions, and again, if not relieved may run on until such an organic change takes place that the case could not then be relieved by any treatment, or at least could not be relieved as quickly as when in its incipiency, not to consider what the patient would have to endure, that should have been relieved long ago.

Dr. E. A. Ballmer says: "To look for phymosis, hunger or earache in crying, fretful, nervous boy babies."

I wonder if he finds preputial adhesions in boys any more often than in girls. The value of male circumcision has been appreciated by a certain class of physicians for years, but few have learned the value of female circumcision.

In an article, "Preputial Adhesions in Girls," by Dr. R. T. Morris, Professor of Surgery, New York Post Graduate Medical School, August, 1903, MEDICAL BRIEF, he says: "Preputial adhesions in girls are rather more frequent than in boys." If this is true, then circumcision is more often indicated in girls than in boys, and why is it that such has not been generally known? I fully believe Dr. Morris is correct, and I think if any physician would examine 100 boys as he should come to them and 100 girls as he should come to them that he would find Dr. Morris was correct. Personally I have no statistics on this, but from children that I have examined for preputial adhesions I find it far more often in girls.

Dr. Morris further states: "That all physicians should make it a matter of practice to examine the clitoris in all girls less than one year of age."

Again he says: "I do not know what proportion of causes of nocturnal enuresis in girls is due to preputial adhesions, but practically all of the cases of this sort that I have seen were due to that one cause."

This should be sufficient reason for any physician to look after preputial adhesions in enuresis of girls.

Dr. Ballmer says: "An adherent prepuce in a small child will sometimes produce a hydrocele."

I would not doubt this statement and have often seen mention of preputial adhesions causing hip joint diseases, which I also believe is true.

Again Dr. Ballmer says: "If early attention be given to the retraction of the foreskin, circumcision seldom becomes necessary."

I cannot fully agree with Dr. Ballmer in this statement. I do not advocate circumcision in all cases by no means, and do not believe it should be performed only when needed. I know that there are many cases that do not have firm adhesions. A tight contracted prepuce or a very long prepuce can be relieved without circumcision by gradual breaking up of the adhesions and gradual dilitation of the prepuce. But when there are firm adhesions, a tight contracted prepuce or a very long prepuce, according to my opinion, circumcision is needed and very beneficial. An excessively long prepuce, as are among some entire families, is an abnormal condtion, and such an excess of redendant tissue is useless and, I believe, very harmful in many ways, even if no adhesions or contractions are present. I believe at least all of it that is not necessary to cover the glans should be removed, even if circumcision is not desired.

If the general practitioner will bear in mind a few of the principles of orificial surgery, it will open up the way for relief in may cases that he would not otherwise be able to control.

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# Clinical Aspects of Emotion and Action

Delivered to the members of the North London Medico-Chirurgical Society, at the Great Northern Hospital, Holloway-road, London, N., on Jan. 12th, 1911.

By Thomas Claye Shaw, M. D. Lond., F. R. C. P. Lond.,
Emeritus Lecturer on Psychological Medicine, St. Bartholomew's Hospital, London.
(From *The Lancet*.)

IT IS allowably true that we do not now know much more than our ancestors about the real nature of mind, though we certainly do know much more about the *disorders* of mind, and of the true significance of certain symptoms; but the law retains its canons of responsibility, and, strive as we may, it refuses to be convinced of mental alienation unless in certain directions, even though clinical experience points out the defects in the system of forming judgments.

Fortunately, in one class at least of legal cases judgment is in the hands of men who have some degree of medical training, men who are constantly brought into association with doctors and who can pass beyond the narrow confines on which legal opinions in lunacy matters are based as a rule, and who can see that such factors as Conduct and Emotion may be the indices of unsoundness of mind by *themselves*, and without the accessories which make the insanity of a person manifest to even the man in the street. These men by their practical knowledge have done much to prevent unnecessary law-suits and failures of justice. You must in practice be often brought face to face with cases where things go wrong in the family, where you feel sure that the conduct of one or other of the parties is giving much trouble, and yet where the plausibility of the protagonist in the difficulties and his, or her, general intelligence and conduct in other matters are such that you deem it hopeless, and indeed impossible, to prove legally that a real mental disturbance is at the root of the trouble. There is apparently nothing wrong with what is called the Intellect, the ordinary relations with friends are kept up, strangers see nothing different from usual, and yet a formerly peaceful home is made a hell through a change in one element of a mental content—namely, an alteration in Feeling or Emotion. Or a patient may be observed to be doing things which tend to compromise himself and to imperil his family prospects—all the while that he talks like an angel, professes the best of motives, and shows to the world around him no sign of impairment of intellect which entitles his friends to the protection of the law, and so he is allowed to pursue his career because those responsible for him are afraid of the legal consequences of trying to stop him.

These two conditions, change of Feeling and peculiarity in Conduct, are those which I wish to dwell upon this evening, because their importance as real tokens of mental alienation is not sufficiently recognized, because they are quite as, if not more, connotative of disordered mind as may be the presence of delusions and hallucinations, and because the stoppage of the danger caused by these two factors demands all your courage and tests your strength in the integrity of your knowledge.

### Emotion and Feeling.

Just consider for a moment how much Emotion or Feeling enters into the whole domain of animal life. In its lower form of Pain it is the safeguard of existence. Without Pain we should be reckless; without Pleasure we should

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become indifferent; without Pain life would be very precarious; without Pleasure life would be monotonous and unendurable. And the same is true of the higher emotions. As long as there is Hope we cannot be resigned to destruction, but in the face of the inevitable we accept the situation and submit to it as gracefully as we can. Life, indeed, would scarcely be continuous if it were not for Emotion and Feeling. If it were not for Love and Feeling the continuity of the species would cease, for Duty (which is not strictly speaking an emotion) would certainly not ensure it. Duty does, indeed, *oppose* the continuity of the species except under artificial conditions, backed up by the law.

Now, one thing to notice especially is the *stability* of Emotion and Feeling. Once given they proceed through the life of the individual without change, without radical change, that is, though they may have cycles of intensity.. The amorous man retains his *proprium* as long as his potentiality lasts, and even after that has gone the feeling may exist in the form of desires, though if it does not it may simply die away without changing into anything except *indifference,* which is the death of the emotional state. The person who hates a thing will, as a rule, hold his hate to his dying day. He may, of course, dissemble his love or his hate for reasons of diplomacy or policy, but he is never thoroughly attuned to the new rôle, and generally he plays the part badly, rejoicing greatly when he can, as the common saying goes, resume his natural complexion. What is the radical cause of a person's emotional complexion we do not know; whether he is to be of the stamp of "the moody Dane" or of the "gay Lothario" we cannot determine; it is not a case of wealth nor even a case of health always, for the rich man may be a misanthrope and the cripple a philanthropist, but neither the success of the one nor the misfortune of the other can upset the natural bent—like politics, the conservative or the radical trend is constitutional.

On the stability of Emotion, then, we build our social fabric; we shape our ends as regards individuals on the basis that their sentiments and emotional tone are the same as they ever were—not their Ideas, remember, but the emotional tone of their ideas. The benevolent man is the prey of the harpy and the extortioner; the miser is left to his niggardliness, despised and ridiculed. If the man of hitherto fixed mental trend surprises his friends by appearing in a new character, if from being a lively Autolycus he becomes a cross-gartered Malvolio, the first question asked is as to his sanity, and herein lies a great truth, and one that we ought always to keep in front of ourselves—viz., the fact that change in the emotional tones is not the precursor merely of mental instability, but it is a sign that the mischief is actually there—that disease has already begun.

You may ask how it is that if Feeling and Emotion are so stable there has grown up such a saying as "he grew to like it." It is true, especially as regards mere sensation, that a substance which is objectionable at first may become indifferent or even taken without murmur at last, but this is probably due to the influence of a new idea that it is doing good, which finally becomes so strong that it overwhelms the unpleasant tone of the old idea by the substitution of a more agreeable one; but though the old feeling may be overwehlmed it is not extinguished, it is but subordinated to the idea of good which is accruing. So that here, as in very many other things, public assertions are unreliable when analyzed.

In the higher region of true Emotion and Feeling it is to be noticed that tendencies, dispositions, may be obscured for a time by the necessities of the moment, but it is only a temporary eclipse,

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and the obscuration has not changed the real nature of the object. In our daily work as medical men we are very liable to be deceived by appearances, and in no department of medical science is this liability more easy than on the mental side of conditions with which we are brought in contact—for there is a mental side to every common ailment—so that it is wise to be on the alert and to ask ourselves the question, "Is there here a real change of Feeling or is it only an apparent change, overshadowing for a time and for a purpose the natural trend which is only in hiding and will again coruscate with its habitual intensity?" The difficulty of the situation is that very one which besets us in many of these investigations connected with mental conditions—viz., that we are dependent on the *subjective* assertions of the individual as a guide to what is found in his sayings or doings. If a person says that he has a pain or a headache or a feeling of pressure it is only rarely that we can say that he has not; as a rule we accept the statement and try to find the cause, but there is no real and reliable test for Emotion; we cannot say—except from the actions of the patient—that such and such an emotional tone is really present, and even then we may make a mistake and declare to be benign what is in reality diseased and malignant. When, therefore, I speak of the stability of Emotion I allow that the general trend in one direction may be upset by temporary causes, but the reversion to the real and basic trend soon reasserts itself—the converted poacher will snare a rabbit or net a trout when the temptation occurs, and the regenerate Scrooge will revert to his parsimony when the newness of his benevolence has worn off. Indeed, the protestations of these perverts are frequently too much; they protest loudly to keep up their courage in the new rôle, because they feel that they are just acting a part; it is like putting a coward into a military uniform to make him fight, because the dress may stimulate him into a swashbuckler's bravery, the true quality of which he does not possess.

**Changed Emotional States.**

As men in practice we often meet with cases where there is a great change of conduct which can only be traced to change in the emotional tone. There are no false ideas about things in general, the patient may remain on the best terms with neighbors, and even at that testing-house of peculiarities, the club, no altruistic change may have been noted, but from your knowledge you will ascertain that in the conduction of intimate relationships there is a radical change in Feeling—and, at first, nothing else. Business conditions may be promoted as usual, but the domesticity of the home is invaded, harmony is interrupted, and where was peace there now reigns discord, impulse becomes the substitute for moderate judgment, and yet nothing can be predicated except a pronounced antithesis in the moods or the emotional accompaniments of the ideas. This change shows itself prominently in feelings toward the husband, for women head the class of this alienation. Love is changed to hate, and, following this, suspicion enters into the field, and then with the presence of unjust and unfounded doubt we are treading closely on the domain of an actually deluded condition. You may take it for granted that at the root of this change there is some sexual trouble.

Freud of Vienna has elaborated his doctrine of "complexes," by which he seeks to cure those cases in which false ideas and changed emotional states are the characteristics of the disorder, by a thorough investigation of the condition of the subconscious mind and its connections, so as to arrive at the deep-seated influences which, though at first unsuspected, really control ultimate ideas and actions. Freud's process is tedious and complicated; it involves long ses-

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sions of examination and argument and perhaps a personal aptitude on the part of the inquisitor, but the process of examination brings out clearly two factors which did not previously receive the attention which they merited—viz., that much of what we feel, say, and do is determined by basic conditions which exist in a subconscious area and are therefore not at once perceived, either by the patient or by the examiner, as being vital to the true conception of the subjective position. It is these deep complexes which must be got at, and it is only after considerable practice and with much application that success can be achieved. Another thing upon which Freud insists, and the importance of it cannot be overestimated, is the frequent presence of a sexual element in the subconscious area which is of the greatest possible influence as a disturbing factor. I have been much interested in finding how often a sexual element is discovered to be of the greatest importance in the history of a case where it was before examination either unsuspected or ignored. Let us review this sexual element for the purpose of showing how fundamental it is in the life of the individual and as a justification of Freud's theory. The sexual instinct is present very early in the life of the individual—too early one feels inclined to think. It leads the school boy into extravagances of conduct which imperil his mental integrity and which probably have an exhausting effect upon his bodily constitution. It may be a necessity—it is, perhaps, none the less a misfortune—that this sexual misus should come so forcibly into prominence at a time when ignorance is unable to control impulses. However, intercourse is so dependent on the timely development of emotions and sentiments that it may be a necessity for the complete unity of a character, for the proper constitution of mental contents, that the elements of the content shall be nascent and be elaborated together, and that unless this early admixture of ingredients occurred there would arise a mental complex in which charity, benevolence, social amenities, and altruistic considerations would be absent. It may be that an unemotional mental habit, a cold, indifferent, calculating machine, which an intellect without feeling would become, would be detrimental to the career of a world which is manifestly compounded of agreeable and painful experiences. We do, indeed, see from time to time instances of the absence of the gradual rise of sexual promptings, and the result does not commend itself to us as satisfactory; we seem to miss in these people that completeness of sympathy with others, that rotundity of mind and character the want of which banishes these inchoate specimens into a class apart, and ostracises them from the perfected social environment. And the worst of it all is that a process which should be allowed to grow naturally in the quiet harmonious adjustment of reciprocal integrities is fostered, nay, absolutely forced, into premature consciousness. The spectacle of semi-nude and suggestive stage-kickers and poseuses does away with all sense of timely curiosity in the opposite sex. I doubt indeed if it does not seriously damage the matrimonial market. There is little new to look forward to; the young person has at the most critical period of his life been accustomed to the revelations and to the perturbations of a nascent function which should have been sedulously kept in the background and not hot-housed by the injudicious fires of those who trade upon the pleasurable side of Emotion and Feeling, careless of the risk to decay brought on by immature functioning. As a consequence, the man either loses early the promptings to marry, or if from social or other considerations he does enter into a matrimonial contract there is apt to be trouble in the early future. Over and over again one meets with mental embarrassments and difficulties due in their basis to

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sexual inadequacy brought on by the injudicious awakening of forces which should have matured in slumber to produce the harvest in the hey-day of life. I doubt if 50 per cent. of the people who are married are really fit for it! The functions have been so anticipated at pleasure that when they become obligatory they are irksome. What other result can be expected than what one meets with! With the cooling of ardency there arises suspicion, the pride of the woman is injured; she thinks that she has lost her charm and that illicit alliances have been formed. Then comes the occupation of separate apartments and the first stage of the final rupture is completed. Almost invariably in the divorce court reports you notice the fact that the married couple desiring to be separated occupy different rooms, and it seems a necessary corollary that this separation must lead to an alteration in mutual confidence.

Please note that so far we have only arrived at suspicion, probably not well founded, but in a way to be understood as possible to the sound mind. There may be no real change of feeling, but the change of after-circumstances has given rise to a train of ideas which menace the unity of the married life. The case is different, however, when the estrangement happens to concern one of neurotic temperament, in whose family there may have been actual insanity and where exists a tendency to a mental instability from causes which but for this trend would have had comparatively little significance. Here we are face to face with a latent morbid sensitiveness fanned into flame by unfounded suspicions of acts never intended, and productive of conditions which are most serious in their results. It is in this class that we note a distinct change of Feeling—Love is turned into Hate, reconciliation becomes impossible, and we are confronted with the spectacle of the home destroyed, the family divided into a partisanship of the one side or the other, and ourselves perhaps called in to adjust the balance of parties as best we can. In this change of Feeling without adequate cause and in the face of facts which speak to the contrary, we should suspect the early development of an insanity which in time will be apparent to all. In its early stages the friends and sympathizers can see nothing wrong, they listen to and receive as adequate the explanation and statements made, possibly with all coherence and with an air of truthfulness, and as they are not primed with all the facts they see no ground for treating the indignation of the self-made victim with doubt or disapproval. They see no insanity even though you may.

It is a curious thing how people generally consider themselves judges of Insanity! Just as they think the sun goes round the world because they see it drop in the west, so do they conclude that the evils are real because the aggrieved one says so! And our difficulties in these cases are very real, because much as we may know that temporary seclusion or residence under skilled supervision is absolutely necessary in the interests of the patient and others we cannot enforce it. We cannot sign a certificate for compulsory detention because the patient is not certifiable in the accepted sense of the word—she would probably be returned in a short time because there is so much lay and so-called "common-sense" interference with the detention and treatment of persons who do not come up to the legal definitions of insanity, that even those who know better are handicapped in their knowlelge and the patient refuses to submit to place herself under a separation treatment which she regards as a branding extinction prompted by the desire to get rid of her for self-seeking purposes. A concrete example of what I mean would work out as follows. A married couple have maintained happy relationship for years and have pro-

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duced a family. In one of these parents there is a history of a decidedly insane progenitor. All goes well until the advent of the climacteric period or the influence of mental strain asserts itself by the production of a change in the emotional tone which leads to bickering and dissatisfaction in the place of contentment and harmony. If the nature of the change is not noticed there ensues a responsive recrimination, relations become strained, and separate sleeping apartments are adopted as a means of escape by the one from the irritating demeanor assumed by the other. This, not unnaturally perhaps, leads to an aggravation of the changed emotional tone, and there follow accusations of unfaithfulness, of cruelty and unkindness, all of which may be absolutely unfounded, though protestations and even proofs to the contrary of the most convincing nature may be to hand.

It may be said that, if the change in emotional tone has gone so far as to set up these unfounded ideas, the case has already become one of pronounced and certifiable insanity, but it must be remembered that it is only later that these ideas, prompted by the change of tone, assert themselves; at the first they are not demonstrably present, though they may have an existence in the subconscious area. To the careful observer there are frequently other symptoms present, though in public they are not apparent, such as abstention from proper food and insomnia, due to suspicion, anxiety, and other associations set up by the changed state. Suppose a person of this group of symptoms were to commit a crime, either to injure herself or to inflict damage on others, there would be no difficulty for anyone acquainted with the facts in giving evidence as to mental incapacity, and without doubt such evidence would be gratefully accepted by the friends of the patient, the very people who up to the time of this criminal behavior could see nothing wrong and would have strongly condemned proceedings calculated to prevent such a catastrophe as has happened.

## A SIMPLE CENTRIFUGE.

Brumbaugh, in the *Journal of the A. M. A.*, tells how an ordinary electric fan can be converted into a satisfactory centrifuge in the following manner: The fan and guard are detached from the motor and the latter is firmly screwed to a solid board about a foot square. A set of bevel gears is obtained from the head of an old sewing-machine—the old-style Singer for example; or if no machine is at hand on which an autopsy is permitted, the gears can be obtained at small cost from the factory. One of these gears is attached by a set-screw to the motor-shaft; the other is attached to a steel rod ⅜-inch in diameter and 16 inches long. This rod is securely held in a perpendicular position in front of the motor by two brass bearings; the lower or end bearing is simply a brass block with a ⅜-inch hole drilled part way through the center, and is screwed to the board on which the motor rests. A ⅜-inch ball bearing is dropped in the hole in the bearing, and the lower end of the steel rod is slightly concaved so that it will rotate smoothly. The upper bearing is a brass cylinder one inch in diameter and an inch or more long, with a ⅜-inch hole through its center. This bearing is held in place by a V-shaped brace, made of a strip of iron 1/32-inch thick and about an inch wide, the apex of the V being rounded to fit around the bearing; this brace is fastened to the motor frame by two screws, one at each end of the V (the screws which attach the fan guard may be used for this purpose), and the bearing is fastened in the rounded apex of the brace with two small screws.

A sewing-machine balance wheel is attached to the upright rod between the two bearings, and the arm carrying the sedimentation tubes is attached to the top of the rod. The entire cost of labor and material in thus converting the author's fan into a centrifuge was $3.50.

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# CURRENT MEDICAL LITERATURE.

## INFANT FOOD REACTIONS.

COWIE and Lyons, in *Archives of Pediatrice,* present the following conclusions:

(1) The infant's stomach secretes all the digestive juices from the first day of life.

(2) Free hydrochloric acid rarely occurs in the infant's stomach during the active part of the day. It may be found at times in the fasting stomach, at the height of digestion, or at the end of the digestive period.

(3) The evacuation of the normal infant's stomach depends, to a large extent, upon the degree of acidity of the stomach contents. Excessive acidity delays evacuation. A total acidity value varying from 8 to 30 offers the normal stimulus for pyloric relaxation.

(4) Basic calcium casein does not inhibit the formation of rennet curds in the infant's stomach. It delays the formation of curd, delays the saturation of the proteid with acid, delays the acid pyloric reflex, and by so doing delays the evacuation of the stomach contents. The action of rennet on basic calcium casein in the test tube is not comparable with that which takes place in the stomach as the conditions are not the same.

(5) Sodium citrate inhibits the action of rennet in the stomach as well as in the test tube. The curd formed in the stomach, and that formed when dilute acid is added to citrated rennet milk, are casein hydrochlorid curds.

(6) The curds normally present in the infant's stomach are paracasein hydrochlorid.

## PREVENTION OF PSYCHOSES.

The *Virginia Medical Semi-Monthly* thinks that in no part of the field of scientific, sociological and philanthropic activities are there graver problems to solve than in that embodied in the prevention of the psychoses, and in successfully dealing with the insane and the mental degenerates. We can conceive of nothing that is of more vital importance to an individual than mental health, and nothing should be more persistently guarded against than mental disease and degeneracy.

It is known that bad heredity, alcohol, syphilis, strain, unwholesome environment and faulty methods of training constitute the chief etiological factors of insanity and degeneracy. Viewed in the abstract these causes may seem to be readily removable, but when we consider them in a practical way we are beset with difficulties not so easily surmounted. As long as human passions dominate the mind, as long as ignorance and indifference regarding correct methods of living exist, and as long as the will and judgment of man are influenced by his feelings and appetites, just so long will the foregoing and other causes be operative in the production of direful effects upon the mind.

Sundry laws, such as the regulation of the marriage of the unfit, medical inspection of children, control or prohibition of the sale and consumption of alcohol, have been suggested (indeed enacted in some States) and doubtless have, to a considerable extent, a preventive influence, and result in good, yet the main reliance upon which an improved heredity and a healthy constitution is to be based is to be found in the creating of a public conscience regarding these matters. Permanent segregation, and in some conditions, sterilization, under State control, of the confirmed mental degenerate, offers one of the best solutions for the prevention of the transmission of defective heredity.

Persistent and systematic teaching and

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training regarding physical, mental and moral hygiene in the child at home, at school and in the factory, constitutes another important factor in measures of prevention, which has not yet received the serious attention deserved. Then, too, clean, temperate and moral living, and wholesome mental habits, avoidance of too great continuous stress, are matters should be impressed more forcibly upon the adult if he would steer clear of mental breakdown.

"Our remedies oft in ourselves do lie,
Which we ascribe to heaven."

That a large percentage of the psychoses may be cured if recognized and treated in their incipiency goes without saying. But how is this to be done? In every city of any considerable size dispensaries or clinics and psychopathic hospitals, or such wards in connection with general hospitals, and outdoor departments at the State institutions, would offer opportunities and advantages in the treatment of cases at a time when abortive or curative measure may be successfully instituted. The medical supervision of cases for a period following their discharge from hospitals for the insane offers another means of phophylaxis—the prevention of subsequent attacks. Indeed such a movement would go far towards educating the public mind in a knowledge of prevention.

Until there is a more general enlightenment respecting the causes of insanity and degeneracy and an application of the best known means of their prevention and early treatment, and until alienists, general practitioners and the public work in unison, with a singleness of purpose, there can be little hope of lessening their prevalence. Here we have problems the solution of which lies mainly in the province of the medical profession.

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## COCAINE INTOXICATION.

Yawger, in the *New York Medical Journal,* states that in cases of acute poisoning in which the drug has been taken internally, the stomach should be washed out at once; respiratory failure is to be met with alcohol, camphor, aromatic spirit of ammonia, and perhaps oxygen and artificial respiration; a rapid injection of normal saline solution has proved beneficial.

The chronic patients may be treated by stopping at the drug at once, by rapidly reducing it, or it may be slowly withdrawn. In many cases its immediate withdrawal will be the most satisfactory, for the reason that during the gradual reduction it sometimes happens that the patient will not remain under treatment when the discomfort incident to the partial deprivation manifests itself strongly; in those States where institutional detention is lawful, these patients are more easily managed by confinement. When maniacal symtoms are present, they usually subside when the individual can no longer obtain the poison. The suffering attendant upon deprivation is not so great as in the morphinist, but there is danger of the symptoms of collapse for some time after the drug has been withdrawn. Strychnine is a sustaining remedy; the mental distress may be relieved by hyoscyamus, valerian, or large doses of bromide; the appearance of collapse should be met by the administration of cardiac and respiratory stimulants; the insomnia is best overcome by prolonged baths; good food should be given at frequent intervals.

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## TREATING HEART DISEASE.

Cornwall, in the *Medical Record,* emphasizes the following points:

Make the diagnosis before prescribing treatment.

Do not give heart stimulants to restore compensation when rest in bed alone will do it, except in certain cases occurring in middle or later life, when prolonged rest in bed might prove injurious.

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Do not give heart stimulants after compensation has been restored.

Remember that children and young people should be kept in bed for at least one month after compensation if chronic valvular disease has been completely restored, and that they should be kept in bed for the same length of time after an attack of acute endocarditis, with or without loss of compensation.

Learn how to use the best remedies and forget the rest.

Do not give digitalis to children or to old people, and always bear in mind the limitations and contraindications to the use of this drug.

Do not exceed 3 minims of tincture of strophanthus at a dose, except in extraordinary cases and where tolerance has been established.

If you prescribed mechanical methods of treatment see that the dose is correct. They can do harm in overdose as well as drugs.

Do not expect to get compensation in a badly decompensated case of valvular disease too soon; be satisfied for a while if, under treatment, the patient does not get worse; improvement in many of these cases must be slow if it comes at all, and attempts to hurry it unduly only exhaust the heart.

Use the smallest dose of any remedy that will do the work.

Rarely tell a patient with serious heart disease how grave is his condition, for such patients easily lose hope and become despondent, which aggravates their condition. The family, however, should always be told, and the patient should be informed of his true condition if that is the only way to secure his co-operation in treatment.

Be slow to give up hope, at least of improving the patient's symptoms in apparently desperate conditions, and especially beware of publishing too definite a prognosis.

Cardiac therapeutics is in the majority of cases a fight against odds, but by the exercise of patience, perseverance, and especially judgment, much may be accomplished.



## PNEUMONIA IN CHILDREN.

Parrish, in the *American Journal of Obstetrics,* says that more than any one thing the cold-air treatment will help the infant's respiratory, nervous and digestive systems. It slows respiration and tends to prevent atelectasis; it quiets the nervous system; it stimulates the appetite and increases the digestive strength. As the infant's power of digestion is its main source of strength nothing should be done that could impair it. The food must be carefully regulated. A common mistake is giving food too often, too strong, or in too large quantity. The patient who does not digest his food has a poor chance of recovery.

In the beginning calomel should be given and followed by castor oil, if the child will take it without a struggle. The oil is very efficient in cleaning out undigested food and the mucus which the child swallows. In the early stages vigorous counter-irritation by mustard is of distinct service. Stomach-disturbing stimulants and expectorants are contraindicated.

Stimulants will probably be needed, but should be given only when positively indicated. The writer relies almost entirely on whisky, strychnine, and strophanthus. A single large dose of atropine is said to be good when the tubes are filling with mucus. Eserine sulphate will often relieve tympanites, but it can not overcome the effects of persistent bad feeding nor that paresis of the intestinal walls that appears a short time before death.

To relieve a threatening syanosis the writer has used with great satisfaction a mustard bath at a temperature of 110° F. The bath should last but three to five minutes. It is usually followed by a drop in the temperature of the infant.

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If fever is causing disturbance it should be relieved as in lobar pneumonia. Finally, and of some importance, if the child is sick enough to lie quietly in one position, we should never forget to instruct the nurse to change the position every couple of house, and occasionally lay the child across her lap face downward.

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## LARYNGEAL TUBERCULOSIS.

Geo. B. Wood, in the *Therapeutic Gazette*, asserts that primary laryngeal tuberculosis is so rare that only two or three authenticated cases have been reported. This is an important diagnositc fact. For instance, given a suspicious lesion in the larynx without the presence of a pulmonary disease, we should hesitate very much before making a positive diagnosis of laryngeal tuberculosis, while on the other hand the presence of the pulmonary lesion throws the diagnostic pendulum strongly toward the tuberculosis side.

The subjective symptoms of laryngeal tuberculosis differ according to the location of the lesion. When the epiglottis alone is involved, there is very little or no voice change, but the pain and difficulty in swallowing are most intense. Should the lesion be limited to the arytenoepiglottic fold, or to the arytenoid bodies, changes in the voice are still very slight, and the pain and difficulty in swallowing are very prominent symptoms. Cases of intrinsic involvement of the larynx—that is, where the disease does not extend beyond the internal limits of the laryngeal cavity—do not, as a rule, cause much pain or difficulty in swallowing, but the voice changes are prominent symptoms; the degree and character of the voice change again being dependent upon the position as well as the extent of the lesion. A tuberculoma occupying the posterior commussure does not have to be of very great size before it produces complete aphonia by preventing the approximation of the vocal cords. Characteristic of even very small lesions in this part of the larynx is the dufficulty of phonation. The voice may remain perfectly clear, but the patient experiences great effort in producing it. When the vocal cords are involved, changes in the character of the voice, such as hoarseness, are more noticeable than the difficulty of phonation. In these cases, complete aphonia is rare unless there has been total destruction of one or both vocal cords, and even then patients learn to produce a raucous voice by the use of the ventricular bands.

The treatment of laryngeal tuberculosis may very properly be divided into two classes, the palliative and the curative. We must remember, however, that at times the best palliative measures are those which produce a cure not always of the whole lesion, but of such certain portions which from their position are of great annoyance to the patient. The frequency of laryngeal tuberculosis makes it perhaps worth while to go somewhat into detail concerning the various methods of treatment, but I shall speak only of local measures which, from my personal experience, seem to possess distinct benefit. When the patient is brought to us for treatment it is first necessary for us to determine whether the case is one in which we shall attempt to make a radical cure, or one in which palliative measures are alone indicated. If we decide upon the radical procedure the treatment becomes chiefly surgical, and the only method of effecting a positive and permanent cure is the eradication of the diseased area.

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## ALCOHOL INJECTIONS IN TRIFACIAL NEURALGIA.

T. H. Weisenberg, in the *Therapeutic Gazette*, says: The method I have used and with which I have had almost unfailing success has been deep alcoholic injection. My attention was first called to it by the articles of Patrick, and the

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method and technique employed are his. I have not injected the superior branch. Patrick himself has abandoned this because of the danger. I use a straight needle, sharp edge, marked off in contimeters up to five and measuring ten centimeters in length, with a stylet whose blunt edge is on a par with the end. The sharp edge is used to penetrate the skin, and then the stylet is driven in so as to obviate the danger of injuring a vessel. After the foramen is reached the stylet is withdrawn and alcohol injected. "In injecting the middle branch the line of the posterior border of the ascending orbital process of the malar bone is prolonged to the lower border of the zygoma, and the needle inserted .5 centimeter posterior to this point. It is directed vertically to the anteroposterior line, but inclined slightly upward in a direction which would attain, at the depth of the foramen rotundum, the level of the inferior extremity of the nasal bones. At a depth of 5 centimeters the nerve is reached at its emergence from the foramen rotundum into the pterygomaxillary fossa.

"For the inferior branch the needle is inserted at the lower border of the zygoma, 2.5 centimeters in front of the descending root of the zygoma, which always can be felt, and almost coincides with the anterior border of the external auditory meatus. The needle is directed slightly upward so as to hug the base of the skull, and a little backward, and at a depth of 4 centimeters should reach the nerve at its exit from the cranium."

The solution I use is 85 per cent alcohol with 4 grains of cocaine to an ounce. I inject 2 Cc. In subsequent injections I use 90 per cent alcohol with the same amount of cocaine.

Most of the injections were done in my office, and I have not used general anesthesia, with the occasional exception of a local freezing mixture. The pain from the operation is never complained of by the patient, who always states that it is less severe than that of a genuine spasm. The patient is generally able to leave the office within fifteen minutes or one-half hour.

As regards the place of injection. In a patient who has pain in all the branches I generally inject that branch first in which the pains originated, and then subsequently inject the other branch. Very often one injection will cause cessation of all the pain, but when the patient has had pain in the whole distribution I inject it nevertheless. My experience has been similar to that of Patrick, Hecht, and others, that whenever the nerve is struck the pain ceases immediately. This can always be recognized by the subsequent anesthesia in the distribution of the injected nerve. Often I have not struck the nerve the first time, and have had to inject two and sometimes three times before I obtained success.

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## AIR EMBOLISM DURING LABOR.

Campbell, in the *British Medical Journal*, reports 2 cases of air embolism during labor, followed by recovery. The first was that of an apparently healthy woman, who had had one child. The second confinement was normal in the first and second stages. The patient lay on her left side in a narrow bed, with a wire mattress, which was depressed in the center. She had a little chloroform during the later stages of delivery and was not turned upon her back until after the child had been born. When the uterus again contracted, the patient suddenly exclaimed that she was dying, became cyanosed, and had a general convulsive seizure. This passed off, and attempts were made to express the placenta, followed by uterine contraction, which caused another convulsion. The following uterine contraction produced the same result, the cyanosis became permanent, and the patient's heart greatly dilated. The placenta was removed by hand and the uterus washed

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out with saline solution. A pint of saline fluid was introduced into a vein in the arm, and strychnine given hypodermatically. The patient gradually improved and ultimately recovered. In the second case, the patient was a primipara and had always been delicate. Delivery was accomplished under chloroform by forceps, the perineum being somewhat torn. After the child was born the uterine contractions produced spasm, with air hunger, and frequency and irregularity of the pulse. Attempts to express the placenta caused uterine contractions and a return of the spasms. The patient's heart became markedly dilated. The placenta was removed by hand and the uterus irrigated with salt solution. No further spasmodic attacks occurred, and the patient slowly recovered.

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### THE BLOOD IN TUBERCULOSIS.

Wright and King, in the *American Journal of the Medical Sciences,* presents the following conclusions:

1. In uncomplicated cases of tuberculosis the average number of red cells is normal or above excepting during a short time prior to death.

2. The hemoglobin percentage averages about 85 per cent. excepting dura short time prior to death.

3. The red cells exhibit an increased resistance to the hemolytic action of salt solutions, this resistance, as a rule, being increased directly as the progress of the disease.

4. Resistance to hemolysis will probably be found of diagnostic value.

5. The prognosis becomes less and less favorable as the hemolytic index falls.

6. The hemolytic index and lmyphocyte percentage bear a direct relationship in prognosis.

7. The total white count increases directly as the disease progresses.

8. In most instances the stage of the disease, in uncomplicated cases, can be more or less accurately determined by the total white count.

9. The polymorphonuclear neutrophiles have but little if any phagocytic action in this disease.

10. A high polymorphonuclear percentage makes a bad prognosis.

11. It is strongly probable that the lympocytes are markedly phagocytic in tuberculosis.

12. A high percentage of lymphocytes is a very favorable prognostic index.

13. The following blood findings are positive proof of improvement in any given case: (*a*) Decreasing white count; (*b*) falling polymorphonuclear percentage; (*c*) rising hemolytic index; (*d*) rising lymphocyte percentage.

14. Blood examinations should be made coincident with every physical examination, otherwise the physician misses most valuable information relative to his patient's condition.

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### BURNS OF SECOND DEGREE.

Let us suppose, says Colcord, in the *International Journal of Surgery,* that we are called to treat a severe burn of the second degree. We find the patient suffering agonizing pain with oncoming shock and a chill. We at once administer a hypodermic of ¼ to ½ grain of morphia, 1-40 to 1-20 gr. of strychnia, and 1-100 to 1-50 gr. of atropin, to stop his pain and apprehension and combat the shock. We then see that the room is warm—80 to 85 degrees—clear it of unnecessary furniture and by-standers and order hot water bottles, or hot bricks, gotten ready. The bed should also be prepared. If we have a nurse or assistant at hand, we can order her to prepare the necessary things for a hypodermoclysis or a Murphy enema.

We must bear in mind that in every bad burn three things are more important than the local treatment:

1. Stop pain.
2. Combat shock.
3. Provide for dilution and elimination of the toxins, which at once are thrown into the blood.

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Having gotten thus far with our work, we can proceed to do the local dressing. The clothing should be carefully cut away—never pulled off or dragged over the burned area. We must remember that a burn is, at first, sterile and we must try to keep it so. Unless we believe that it has become infected through dirty handling, dirty clothing dragged over it, or a dirty blanket laid on it, it is best not to wash the burn. Estes washes the surrounding skin with 5 per cent. carbolic solution, protecting the burn with pledgets of wet gauze. With our burn ointment we have not found this necessary.

Pieces of gauze of convenient size are now spread thickly with the ointment and applied somewhat beyond the burned areas. Over this cotton and over all a bandage is placed. The patient is now put to bed, and if shock continues the normal salt solution is repeated every eight hours, giving plenty of water to drink. Nourishment for the first three days should be liquid on account of the intense congestion of the alimentary tract. There we may gradually feed according to conditions.

There should be the usual care of the bowels, skin, kidneys, etc., not forgetting, in our zeal over the local treatment, that we have on our hands a sick man with blood loaded with toxins, with meninges, lungs, stomach, kidneys and other organs congested and filled with emboli.

We re-dress our burns daily, gently wiping away the discharge of serum and broken down cells, which is poisonous and irritating, with dry gauze or cotton. Blisters are opened and pieces of loose skin removed with sterile scissors or forceps, but all skin is left in place as long as possible to protect the underlying, new-forming skin.

Every dressing should be made with aseptic care, clean hands, clean gauze and clean instruments.

As the old epidermis is she we have a red raw irritable surface, and we must reduce our ointment to one-half or even one-fourth strength. In an occasional case even this is too irritating and we change to oxide of zinc ointment or, better, to strips of gutta-percha tissue wet in normal salt solution. Over this are applied the gauze and one-fourth strength ointment, or zinc ointment, cotton and bandages. When the islands of epidermis have coalesced, we can change to aristol or any dusting powder.

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### PROGNOSIS IN BURNS.

A. W. Colcord, in the *International Journal of Surgery*, remarks that there has been much discussion about the cause of shock in burns. Some claim it to be mainly phychic. Others, as Crile, claim it to be due to nerve injury, while many investigators, notably among the Germans, ascribe it to the rapid and intense toxemia. Each man brings forth good experimental evidence for his claim. In my opinion it is due to several factors, the most important being the following in the order named:

1. Psychic effect of a severe accident with added excitement from surrounding friends and bystanders.

2. Severe sudden pain.

3. Rapid toxemia from absorbed poisons in the sick area, partly from hemolysins and partly from chemically changed lymph in the lymph spaces.

4. Reflex nerve phenomena from injury in the burned are of: (a) nerves of pain; (b) nerves of temperature; (c) vasomoter nerves.

5. Rapid congestion and embolism of vital organs. Autopsies on cases of death, apparently from shock in burns, even a few hours after the accident, show intense congestion of meninges, kidneys, lungs, stomach and intestines, with emboli of clumps of red blood corpuscles throughout these organs (Ravogli).

Ulceration of the duodenum, stomach and intestines following burns is prob-

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ably due to embolism. There were no gastric or intestinal ulcers in my series. There were, in 2,000 cases, eleven deaths, all but one during the period of shock.

Among the symptoms of burns we find:

1. Pain.
2. Shock.
3. Chill.
4. Nausea and vomiting.
5. Delirium.
6. High toxic temperature.
7. Scarlatiniform rash (occasionally).
8. Suppression of urine.
9. Albumin or blood in the urine.
10. Septic temperature if infected.

The causes of death are:

1. Shock, if within a few hours.
2. Toxemia, if between one and four days, from:
   (a) Absorbed toxalbumins.
   (b) Hemolysis.
   (c) Arrested secretion.
3. Congestion of vital organs.
4. Embolism of lungs (Estes), brain kidneys or other vital organs.
5. Toxemia from slough in one or two weeks.
6. Toxemia from infection of burn.
7. Suppression of urine (early).
8. Ulcer of duodenum, stomach or intestines.
9. Exhaustion from long suffering, suppuration, etc.
10. Hemorrhage from sloughing of a large blood-vessel.

## PRACTICAL POINTS ON FRACTURES.

By Joseph E. Fuld, M. D., New York.

(In the *International Journal of Surgery.*)

With a history of a trivial injury, followed by a fracture, such as stubbing the toes in falling, or even sudden turning over in bed, always think of a pathological fracture. An X-ray picture may reveal a tumor, which may be a sarcoma, secondary carcinoma, gumma, cyst of bone, etc. These cases are frequently of medico-legal interest.

Always have a physician or nurse assist you in reducing and setting a fracture, who will share the responsibility and act as witness should suit be brought against you. If necessary, call in a consultant. Always give a guarded prognosis.

In fractures of the nasal septum, the interior of the nose should be inspected frequently after replacement of the fragments, as the hematoma, which generally follows the injury, often becomes infected and must be opened early.

In fracture of the spine and of the pelvic bones, it is important to catheterize the patient at regular intervals. In the latter condition this will aid in the diagnosis of rupture of the bladder, which is shown by the presence of blood or bloody urine. If necessary, the bladder should be irrigated.

Leave instructions that should a fractured limb become swollen, bluish or very painful, you be notified at once; and always respond to the call or send someone in your place. If there is much swelling, cut the plaster cast or loosen the dressing and reapply it less firmly.

In doubtful cases of fracture of the base of the skull, a lumbar puncture showing bloody fluid will give conclusive proof of its existence.

Bleeding from the nose and ear following head injuries does not, necessarily, mean fracture at the base of the skull. The hemorrhage may come from an abrasion of the auditory canal or the mucous membrane of the nose.

There are many cases of sprained, weak, rheumatic wrists that are instances of unrecognized fractures of the scaphoid bones. The X-ray will reveal the true nature of the lesion.

Temporary splints may be improvised from all varieties of articles and materials—umbrellas, walking sticks, golf clubs, broom sticks, newspapers rolled up into narrow bands, old bandboxes, bed slats, cigar boxes.

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# THE DOCTOR HIMSELF.

### HARVEY AND BELL COMPARED.

IN A lecture on Charles Bell, printed in the *Lancet,* Arthur Keith calls attention to a remarkable similarity between the discoveries of Harvey and Bell. Monro, as we have seen, was puzzling over the meaning of spinal ganglia when Bell was a student in Edinburgh at the end of the eighteenth century. Fabricius was trying to explain the meaning and use of valves in the veins when Harvey was studying in Padua at the end of the sixteenth century. They were designed, Fabricius thought, to secure an even distribution of the blood during its reflux from the thorax to the extreme parts of the body. Harvey and Bell came to London to observe, reflect, and experiment, and teach and practice for a livelihood. Harvey brooded over his "new" idea from 1616 to 1628 before publishing; Bell over his from 1807 to 1821. Harvey found the arrangement of the valves could not be explained on the current teaching of the day. They allowed blood to pass only in one direction, and that was towards the thorax. The current teaching could offer no explanation of why the lungs required a special ventricle and an artery as big as that to the whole body for their special blood-supply. No explanation was offered for the existence of the tricuspid valve, nor for the semilunar and mitral valves. Harvey was the first anatomist to formulate as a working principle for the investigator that the existence and form of every organ and part of the animal body is determined by function, and that by a study of form a key or guide may be obtained which will direct the inquirer as to the manner in which the function may be experimentally demonstrated. A rational study of anatomy guided Harvey and Bell to their discoveries.

On whatever standard one proceeds to judge, Charles Bell must be assigned a first place amongst the world's anatomists. He did for the anatomy of the nervous system what Harvey did for the circulatory system—brought order out of chaos. John Hunter was probably a greater discoverer than either, but he was anatomist of life rather than of the human body. Harvey proved his thesis in every point; his demonstration was complete. His inclinations were under the sole guidance of his facts. Bell, as we have seen, sometimes allowed the facts to follow his inclinations. In Bell's favor we must take into consideration he was dealing with the most complex and elusive system of the body, one which can be interrogated with success only by the more delicate modern means which Bell had not at his command.

In conclusion, the author quotes a footnote from Sir Charles Bell's treatise on the "Nervous System of the Human Body": "In your department," Sir Humphry Davy said to him, "you can hope for nothing new. After so many men in a succession of ages have labored on your subject, no further discovery can be expected." "This," writes Bell, "shows great ignorance of anatomy since every improvement points to something new, and the higher we go the more is the field of view extended." Once a new path is found there is no telling the various discoveries it may lead to. The path discovered by Charles Bell is one which has carried his successors into new and and wide fields. Nor are the methods which Harvey and Bell employed to elucidate the human body exhausted; those who know the structure of man best

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know how obscure are many parts and organs of the human body, and how indifferently they can be explained on the basis of our current teaching.

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## DO WE LIVE OUT HALF OUR DAYS.

Life tables elaborated to demonstrate the average period of human existence show that pursuits and habits appreciably influence longevity, said Howe, in 1884.

The husbandman survives the mechanic, the merchant outlives the professional man, and the "commoner" attains the greatest average age. By the "commoner" is meant the one who leads a comfortable career, and never indulges in excesses. Utter laziness shortens life as much as a condition of hardship. The strong arm is possessed by him who puts forth strength—makes an effort. An unused brain leads to inanity and premature decay; and mental overwork hastens apoplexy and paralysis. The brain needs recreation, which means variety in kind of intellectual work. A game of billiards will refresh a tired mind—the bookkeeper needs diverting exercises, and so does the overworked professional man. At the age of fifty the weary and worried lawyer, minister, or doctor should have a farm to look after—he should hunt and fish, and row and ride. In the cultivation of choice fruits and fine stock the gentleman farmer wholesomely exercises both mind and body; but to retire from business and do nothing is exceedingly dangerous. It is safer to wear out than to rust out. Recreation does not mean stupor and idleness.

The average agriculturist has opportunities for diversion and recreation, yet he overworks in seed-time and harvest; he is careless about sitting in draughts of air when sweltering with heat; and he allows his stomach to be gnawed with hunger when he goes to town that he may save the expense of a lunch. In that respect he cheats himself outrageously.

Ponder over the vital depression produced by the indulgence of grief, envy, hate, revenge, jealousy, and needless fear. Think of the deadly effects of intemperance and unchastity. There are those who eat too much nutritious food, and who at the same time exercise too little, yet they are few in comparison with those who are doomed to drudgery and scanty diet. In large towns and cities there are numbers of pitiful women and children who are not well clothed and housed, to say nothing of the pangs of hunger that have to be endured.

Well, what is to be the remedy for such evils? Wisdom will cure a multitude of ills. Let the brain taxed take heed and rest; instruct the farmer to take half as good care of himself as he does of his stock; reason with the intemperate and the unchaste; and educate the poverty stricken to take hope and see how they may better their condition in life. Cultivate good cheer when despair holds the gloomy in chains. "The world at best is *not* a dreary place." It is simply dreary to those who make it such, by those who hum deplorable songs written by pessimistic poets. Away with "solemncholy" hymns set to long meter, and sung in sepulchral tones. There may be melody in plaintive notes, but the heart grows heavy in listening at too many of them. If we could live out half our days we should look on the bright side of things—we should try to feel that this world at *best* is a beautiful place.

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## GERMAN MEDICAL PRACTITIONERS.

An article in the *German Medical Weekly* gives a statistical survey of the medical profession for 1910. Those practicing numbered 32,449, or 5.01 doctors for each 10,000 of population, an increase of 480 over 1909.

A still further growth may be ex-

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pected, the number of medical students having risen from 9,239 in 1909 to 11,125 in 1910. The increase in number of physicians was mostly in the cities; of the 480 additions, 329 went thereto. For each 10,000 inhabitants Berlin has 12.32 doctors, Wiesbaden 22.6, Munich 16.6, Stuttgart 9.7, Dresden 9.2, Leipzig 8.3, Chemnitz 5.6, Plauen 4.8, and Gelsenkirchen 4. The number of female doctors has risen from 55 in 1908 and 69 in 1909 to 102 in 1910; of these Berlin has 32, Munich 6, Frankfort 6, Dresden 6, and Hamburg 4. The number of female medical students has risen from 371 to 512.

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## THE DISTINCTION BETWEEN ALE AND BEER.

Nowadays ale and beer are convertible terms, but formerly there was a distinction between the two. In Johnson's dictionary ale is a liquor mode by infusing malt in hot water and then fermenting the liquor, while beer is a liquor made from malt and hops. From a fifteenth century roll of household charges, it appears that beer was then made from oats, wheat, and barley, used either together or separately. Two centuries later hopped beer was known in England. At first the use of hops in brewing was widely resented, and an edict of Henry VIII. forbade the mixture of either hops or sulphur with beer, while in 1549 the City of London petitioned Parliament against "hoppes" on the ground that "this wicked weed would spoil the taste of the drink and endanger the lives of the people." Later, however, the use of hops for brewing came into more general favor, and Gerard wrote: "The manifold virtues of hops do manifestly argue the wholesomeness of beer above ale."

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## ANCIENT MEDICAL PHRASEOLOGY.

The *Lancet* has recently been conducting an interesting correspondence upon the etymology of the French-Anglicised word *enceinte* used to indicate a condition of pregnancy. One of the correspondents contributes a communication full of information and interest concerning general medical phraseology, which we reproduce for the perusal of our readers:

Sir:—The note in the *Lancet* of Dec. 31st, 1910, upon the etymology of the word *"enceinte"* does not say anything as to the date of its introduction into the vocabulary of the polite Briton as a substitute for the older and more medical "pregnant" or for the more purely English "with child." I infer, however, from its non-occurrence in a list of similar euphemisms before me that it was not in use in the opening years of the last century. The list referred to is appended to a letter addressed to the editor of an unnamed newspaper, which find in a scrap-book once the property of an ancestress in the west country, who, if internal evidence suggests that she did not herself compile the "album," wrote her name in it in 1832. The letter is signed James English, and dated "Cornwall, Aug. 5, 1813," the name used being, no doubt, like the letter, an example of the author's humor. He writes:

"Having had occasion of visiting London this spring, a place I have not been in these forty years before, I took up my quarters, by her particular desire, at a female cousin's of mine who lives in the neighborhood of Grosvenor-square—a lady who, though not many years younger than myself, moves and delights in the top of the fashion, as much as if she was only twenty-one. Having rested myself the first night after so long a journey, I began, as natural, to inquire after our friends and relations in town; when, happening to ask particularly after a young niece of mine, who had been married about nine months before, I was told, with an air of seeming indifference, 'that she was in *confinement.*' Alarmed at this news, I exclaimed, 'Good G—! what has she done to incur this dis-

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grace?' 'Disgrace!' replied my cousin. 'What disgrace can there be in an *accouchement?*' Here I was as much at a puzzle as ever, till, upon a further explation, I was told that my niece was *lying-in,* and that *confinement,* or *accouchement,* was the fashionable word to convey the meaning of my *'horribly country phraseology.'* .'Ho! Ho! cousin,' says I, 'If this be the case, it will be but civil in you to give me a list of those fashionable phrases, that I may not disgrace you or myself, whilst I stay in the metropolis.' After some pause and a look of silent contempt, which showed a superiority of understanding, she complied, and as the catalogue may be beneficial to other travelers as well as myself I enclose you a copy for your useful and entertaining paper, and remain, sir, your most obedient servant, James English."

The cousin in the neighborhood of Grosvenor-square must have been a lively old lady to judge from a list from which two or three items may be cited as being perhaps of some historical interest to readers of the *Lancet*:

Apothecaries=Doctors, chemists, or medical men.

Man-midwife=Accoucheur.

Pregnancy=In a family way; or to speak poetically in that way in which "women wish to be who love their lords."

Cutting off a leg or an arm=Removing a limb.

Suckling of children=Feeding of infants.

Corncutters=Chiropodists.

The report of a trial pasted on another page of the same tattered volume is a reminder of the difficulty under which apothecaries used to seek to recover their fees, and certainly, in respect of the observations of counsel, of the change in forensic manners. "In the Common Pleas, during the trial of an action brought by Messrs. Price and Thompson, surgeons and apothecaries. for medicine and *attendance* afforded to a pork butcher named Gynn who had got a sore toe, Sir James Mansfield observed, 'I think it is a terrible thing that an apothecary cannot charge attendance unless he gives physic, whether it's wanted or not.' The daughter of the butcher, it appeared, had also a sore finger and an opening draught had been given her. 'See, gentlemen,' said Serjeant Shepherd, 'because this poor young lady happens to scratch her finger, she is condemned to an opening draught! Take care of your fingers, gentlemen, or the Lord have mercy on your bowels!'" The evidence in this case, given by an apothecary, who described himself as "of the old school," upon his own practice with regard to charges, was that he "never directly charged for attendance, but that when he thought it ought to be considered he said so in a *modest* manner at the foot of the bill." The same gentleman, by the way, showed that even in those days a scientific witness might sometimes get his own back from a cross-examiner who handled him roughly, for when in order to show that the opening draught was necessary treatment he was pressed to say that butchers lived well and were often of a gross habit of body, he retorted, "Yes, sir, I think all professions live well when they can. No doubt, sir, you take your wine." Serjeant Vaughan, counsel for the plaintiff, to whom this was addressed, laid stress upon the physical attributes of butchers in terms of refined humor which make one try to recall the name of the gentleman supposed to be the prototype of his learned brother Buzfuz. He said to the jury in the course of his speech, "Oh, gentlemen, I would that I could produce their butcher here! No doubt he has a carcass bursting at every pore! and a toe that would take a quarter of a pound of meal to poultice it! *A toe!* I daresay it would cover Lord Wellington's position. Gentlemen, you all know what a butcher is! Many an

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opening draught it must have taken to open him and many a tonic to shut him up again!" In spite of his eloquence, however, Serjeant Vaughan consented to withdraw the record and to allow his client to be non-suited on Sir James Mansfield expressing the opinion that the charges were too high, and the reporter, in conclusion, informs us that the litigation was over a bill of two guineas, which the defendant had actually consented to pay, but only after legal proceedings had been commenced. As he would not pay the costs as well the case came into court with the above result, presumably at the ultimate expense of the unhappy surgeons and apothecaries.

The same scrap-book, it may be mentioned, contains a long account of a young lady named M'Evoy, of Liverpool, who had become blind and who after being blind-folded in addition was able to distinguish by means of her finger-tips the colors and shapes of objects, to read print, and to declare the nature of articles in an amazing manner, the peculiarity of her feats being that glass was placed between her and the objects to be named, not, be it observed, with a view to making her task more difficult by preventing her from feeling them, but because the interposition of the glass actually assisted her, and because she could not exercise the same perception without it. This was before the days of music-halls, and apparently Miss M'Evoy was a retiring young lady who did not perform for gain, and shunned publicity. Perhaps, however, she may have been a well-known character of whom authoritative records exist accounting for her performances.

By the way, I have omitted to point out that the note on *"enceinte,"* to which I have referred to above, beings by mentioning its pronunciation as a puzzle to many, but gives no rule with regard to it. May I suggest that *enceinte* is pronounced as if it were spelled *"en-sainte,"* the second syllable being indistinguishable from the feminine of the French word for holy, and that it is not possible to print an exact English equivalent, the nearest, perhaps, being the name of a well-known artist, the "einte" having much the same sound as the "ant" in cant or pantaloon, pronounced with a slight Cockney twang.

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## PROPER REMUNERATION.

The physician is actually and proportionately underpaid, and it is almost entirely his own fault, declares the *American Journal of Obstetrics.* If overcrowding prevents the demand for proper remuneration because others will act for less, let him place the responsibility for the overproduction of doctors where it belongs and register his protest not alone for selfish reasons, but vastly more for the benefit of the whole profession and the community. The competition that affects livelihood is keenest and most demoralizing among the mass and not among the few. There is no way by which the public can distinguish between the physician who has spent time and labor to become proficient and one who has not. We have but one degree, and it may mean much or little. Nor is there any good reason why the fee of the physician should be rigidly fixed with no reference to the value of service. He should charge for the thoroughness, efficiency, skill and time employed in his study of an individual case. Many times his diagnosis, advice and treatment are more valuable than surgical interference. The proper examination of a patient has become a problem involving time, wide knowledge, and chemical and microscopic analysis and search, requiring more and more special training and skill. The time has come for the physician to assert his position and claim what he deserves. He should receive his reward openly and not secretly, and resent undervaluation to the patient and not to the surgeon. Let him stand on his own feet and not beg

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or barter with the surgeon for a hidden share which he hasn't the courage to ask for. Let him seek assistance when he needs it as if he were the patient, and receive it with a clean hand and preserve a decent opinion of himself and his possibly more fortunate confrere.

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## CONSUMPTION AND THE DRAMA.

The recent pathetic death of the actor, Frank Worthing, from hemorrhage of the lungs, whilst the orchestra was giving the overture to the comedy upon which the curtain did not rise that night, recalls to the *Dietetic and Hygienic Gazette* how frequently consumption takes its toll in the theatrical profession, as in the arts generally. Like many another actor—Moliere and Rachel, and long before and since their time—Worthing was for years a sufferer from this dreadful disease. Two years ago in Detroit— the same city in which he died—he had a like hemorrhage, which at that time almost proved fatal.

Joe Jefferson related how, when in London he advised Artemus Ward, who had for years previously been a sufferer from tuberculosis, to be careful lest the kindness of that most hospitable city should kill him. On no account was Ward, in his delicate state of health, to expose himself, after giving his entertainment, to the pernicious effects of a London fog. But he was weak, and yielded to the influence of his many admirers. So his brilliant career was brief. "He had that unfortunate desire for the second round of applause, that is so fatal to the health and position of an actor."

Ward died a few months after his London *début,* attended to the last by Tom Robertson. A strong attachment, such as so often obtains among player-folk, had sprung up between them; and the devotion of his new-found English friend deeply touched Ward, characteristic as it was of Robertson's noble nature. Just before the death of the pathetic American (genial as he ever was despite his sufferings), Robertson poured out some medicine in a glass and offered it to his friend. Said Ward: "My dear Tom, I can't take the dreadful stuff." "Come, come," said Robertson, urging him to swallow the nauseous drug, "there's a dear fellow. Do now, for my sake; you know I would do anything for you!"

"Would you?" said Ward, feebly stretching out his hand to grasp his friend's, perhaps for the last time. "I would, indeed," Robertson assured him. "Then you take it," said Ward. A few hours afterward the great humorist passed away.

Robert Louis Stevenson was not an actor; yet he was of the artist temperament which has in the past so oftentimes succumbed to the tubercle bacillus. And at least one of Robert Louis' stories was made into the fine play of Dr. Jekyll and Mr. Hyde. A most dramatic incident grew out of Richard Mansfield's visit to him at Saranac Lake. Stevenson was there, in the Baker cottage, as a sufferer—too far gone, however, for restoration to health. In one corner of the sitting room a chair was put upon a table—and this impromptu stage was alternately illuminated and shadowed by the only light in the room—that of logs blazing in the fireplace. In a corner opposite sat the consumptive author, whilst the great actor went for him through several scenes of the gruesome drama, upon which they had collaborated.

Paul Laurence Dunbar, the colored poet, died of the disease which destroys the life of every other adult among his fated and unfortunate race. He died unsatisfied of his only ambition—to see his maiden play staged. Fearful—with too good reason—that death would overtake him before he could finish this last literary achievement, he lay at his home in Dayton, Ohio, nursing what little

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strength remained to him, so that he could dictate bit by bit what was still to be done of this work. Besides the poet's inherent wish for life, Dunbar had but one other—the completion of his play. And this desire was unfulfilled. He got only so far as "a sort of rehearsal, in which his mother and others of his family took part, several friends helping out."

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### THE POSITION OF THE GENERAL PRACTITIONER.

The *Lancet* comments on a paper recently read by Mr. Edward Jessop (President) before the Hampstead Medical Society drawing attention to the gradual change which is taking place in methods of treatment of disease and the effect this is having upon the interests and position of the general practitioner. Without containing anything new, Mr. Jessop's views form a good *résume* of some urgent questions. Whereas formerly treatment mainly consisted in the administration of drugs, new and expensive drugless methods are now replacing the old, and there is a tendency to substitute institutional treatment for treatment in the home, on the ground that the most efficient treatment of disease needs the safeguard and apparatus which are to be had completely only in a hospital or institution, and not in a private house of any kind. The effect of such an opinion, if it become general, will be to deprive the family practitioner of a large part of his practice, at any rate of most of his serious cases. "However much anxiety the present may give the thoughtful practitioner," says Mr. Jessop, "his future is still more precarious, every man's hand is against him; the medical official seems desirous of controlling some ever-expanding portion of the community in order to advance his own sphere of interest, by getting under his own organization whole masses of the public and pauperizing them by offering them free or inefficiently paid medical service." Although we cannot agree entirely with Mr. Jessop in attributing to the rapacity of the medical official the loss which the general practitioner sustains nowadays in many directions, there is much that is true in his complaints and fears. The suggestion of remedies for this state of things is a much more difficult matter than the statement of their many causes. Mr. Jessop finds salvation in professional coöperation in the form of local unionism. As far as the rivalry of out-patient departments goes this form of action is sound. His proposals for the opening and upkeep by the local medical practitioners of a bacteriological and X-ray laboratories are novel but not too enterprising for certain districts, and would, if carried out, be a practical evidence of local coöperation which it would be pleasant to record. There is danger, however, of local unionism running to excess and impeding that coöperation between all branches of the profession which the institution of consultative out-patient departments would do much to establish and consolidate.

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### A CHINESE DOCTOR'S HARD LUCK.

The following translation from a local native newspaper appeared in a recent number of the *Central China Post*. It would seem that medical practice in China is sometimes attended with drawbacks.

"A wealthy man whose young child was sick called in the doctor, who medicined the child until it died. The father in a rage engaged ten stalwart coolies to go to the doctor's house and destroy everything in it, besides giving him a good beating into the bargain. They had not been gone very long when they returned, so the wealthy man asked how they had polished him off so soon. The stalwarts replied: 'By the time we got there a band of men sent by another patient had already smashed up the house and beaten the doctor.'"

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# REFRACTION.

## EMMETROPIA TAKEN FOR GRANTED.

THE *Optical Journal* points out that oculists in the past have set up for themselves a standard, an emmetropic eye, one which forms on the retinal screen a perfect image of distant objects when the ciliary is at rest. But because an eye is emmetropic, or has been made so by glasses, does not make it necessarily a full functioning eye. Barring diseases of the eye, which is found in only 3 per cent, or less, of the cases which come to the optometrist seeking glasses, an eye is full functioning which, with due regard to the age of its owner, can accommodate exactly for all points within its range of vision. But there may be present, and there often is, a condition which might be called a "relative deficiency of the accommodation" whereby the unconscious efforts of the eye to exactly focus an eye are not strong enough for the purpose, and there must therefore be an extra impulse or impulses, for this purpose, which extra impulse may be the real cause of those conditions of ocular and other discomfort to which the name of eye-strain has been given. Practically all optometrists and oculists hold directly or tacitly to the belief that an eye made emmetropic is and must be a full functioning eye. This is an assumption which in the last few years some optometrists are beginning to doubt, so that there have been devised methods of testing the eyes for near with the accommodation in full force, to see whether there is a deficiency of the accommodation for a near point or not. This does not mean the finding of the amplitude of the accommodation, but testing at a near distance either by dynamic skiametry, or with the cross cylinder, to see whether when on object is fixed the eye also accommodates for the same point, or whether it lags behind, and in this latter event what plus sphere must be added to correct this lagging. The result of such a test gives the near correction directly and not as the result of an inference from the amplitude of the accommodation. One of the results of this style of test is a surprising number of young people and children who need a low amount of plus to help out in reading and studying. It seems to be true that many eyes are not designed by nature to be used for reading and close work, even if the distance error is corrected, and for these there must be extra plus for this purpose for all near points.

## MORAL EFFECTS OF EYE STRAIN.

(From *The Illuminating Engineer.*)

When the organs of vision are strained by overwork under improper conditions they enter their protest in the same manner of the other organs of the body, namely, by the sensations of fatigue and pain in the organs themselves. This should be sufficient notice to the individual to remove the conditions producing these ill-effects. But the mere aching or burning of the eyeballs is not a sufficient admonition in many cases, and the worst feature of it is that the discomfort of the eyes themselves may be a small part of the actual evil effects produced. The "sympathetic strike" is a common occurrence in the economy of the human body, and the organs of vision are so intimately connected with other important nerve centers that it is impossible to overwork them without sympathetic action in other directions.

In all probability modern civilization is still in a state of barbarism in respect to its treatment of criminals. It is not so long ago that the insane were treated as outcasts and were left to their own destruction, if not to actual abuse. The criminal is manifestly an abnormal indi-

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vidual, and there is no other test for sanity than conformity to general modes of thought and action. Society will some time treat the criminal as a pathological case, just as the insane are treated today; and doubtless a still larger proportion of cures will be made by methods worked out from the scientific study of physiology, anatomy and psychology.

Insanity may be, and is commonly produced by various unusual strains upon either the physical or nervous systems, and there are well-authenticated cases where it has resulted from the nervous strain resulting from attempts to use eyes that were optically imperfect. If such total aberration of the intellect may result from severe eye-strain, it is not at all surprising to find that a lesser disturbance of the mental equilibrium, evidenced by vicious actions, should result from a lesser degree of eye-strain.

We published an article some months ago describing an experiment made upon an American schoolboy, who had been directed to wear glasses. A careful attention to the conditions under which he used his eyes both by natural and artificial light soon not only enabled him to discard his glasses, but produced a very marked change in his conduct; while he had previously been irritable and given to fits of anger and disobedience, he became wholly tractable and equable in his disposition when the irritating eye-strain had been removed.

Another case of a similar but rather more pronounced character was reported from the psychological laboratories of the University of Pennsylvania.

It is said that violet light is used in Russian prisons as a means of torture and of destroying the mind, both of which purposes it accomplishes. While too much credence must not be put upon such hearsay, it recalls a case in this city where blue light was used in a nickel theater for some purpose and the management found it impossible to keep their help but a few days at a time; they would soon become irritable and quarrelsome, and then leave. When the use of the blue light was dispensed with there was no further trouble of this kind.

There is urgent need of a better understanding of the effect of eye-strain upon not only the health of the body, but of the mind as well.

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## SQUINT OR STRABISMUS.

A. E. Davis, in the *Post-Graduate*, states that this affection of infancy and early childhood, has, until comparatively recent years, received but scant attention. In the good old days, now happily gone, the family doctor on seeing a child with a cross eye, often gave the advice to "do nothing, as the child would likely grow out of it." At any rate the advice was to wait until the child was eight or ten years of age before active treatment should be begun. We know now that a squinting eye if left till the child is eight or ten years of age, as a rule loses the sight, or it becomes so weakened by non-use of the eye, as not to be of practical value—even when straightened by operation. Vision in the human family in *binocular* in nature, that is, the two eyes fuse the images of an object into one and perceive it as one. This function or faculty of fusing the images into one is fully developed by the age of six or seven years; hence, if an eye in a child is allowed to squint and not be brought into the act of vision, the little patient soon learns to suppress the image in the squinting eye, the vision becomes weakened, as a rule, and binocular vision is never, or but rarely, developed, if the eye is not straightened either with glasses or by operation, before the age of six. So it is altogether important in all cases of squint to have the patient put under treatment immediately the eye turns, certainly before the sixth year—if we wish to preserve the sight in such eyes, and have the child use the eyes together in the visual act.

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## DEFICIENT EYE-SIGHT IN CHILDREN

Recent reports of Dr. Maxwell and of Leonard P. Ayres, director of the Bureau of Child Hygiene of the Russell Sage Foundation, that children with defective eyes apparently made equal progress with normal children, whereas those with all other defects, such as enlarged glands, adenoids, defective teeth, etc., progressed more slowly, have been quite puzzling to many, says the *Opthalmic Record*. They could not understand how a child with a defect in the organ most used in acquiring his education was less hampered than one whose teeth, for instance, were imperfect.

As an explanation, Dr. George W. Vandegrift, an eye specialist, with much experience in free clinics, has given his opinion as to how this could be possible. He says in a recent communication:

"This reported result is not so remarkable when we consider that only a little portion of the whole matter is ever touched upon in this work. Children with defective long vision are always detected and discussed, never those with normal distant vision, but defective eyes. These might be found in large numbers, but are absolutely ignored. A child with defective distant vision will naturally turn to his books, for there his vision is best. Notice the Germans with high percentage of myopia (short-sightedness). Again it is a matter of experience among the oculists that subjective symptoms as well as objective symptoms are rare in young children as the result of eye strain. Most children do not complain of headaches, etc., till high school. If years pass before the effects of the defective sight are felt, is it not a possible explanation why a high percentage of defective vision may be found in the bright children? There is no reason, however, why defective vision does not retard progress. How can we tell how much brighter a boy might be if his eyes were normal? I believe that if every child in school were examined and defective eyes with normal distant vision were discovered, our figures would be very, very different. How can we tell anything about the effects of eye strain for near work when we only study the distant vision?

"We cannot do properly for children's eyes till every one is examined—the defective with defective sight—others who are supposed to be normal yet are defective, a class that suffers the more because it is undiscovered and neglected till the damages are done."



## COMMON AFFECTIONS OF THE EYE.

Bennett, in the *British Medical Journal*, takes these up for the benefit of the general practitioner. He warns against poultices. To diagnosticate iritis, use a weak solution of atropine; if the pupil dilates symmetrically, iritis may be excluded, and the patient man continue with the atropine for a few days. For a conjuctivitis, use weak boric acid solution or even one of common salt in distilled water; never lead lotions as they will cause a deposit on a possible ulcer. There is no need to keep patients with conjunctivitis in a dark room. In the subacute form, known as angular conjunctivitis (Morax diplobacillus) the zinc salts are indicated. In inflammation of the tear sac in infants, instruct the parents to keep the sac free from pus by occasional firm pressure at the proper point. As a phophylactic of ophthalmia neonatorum, Crede's method is excellent. To diagnosticate a possible corneal ulcer, use fluorescin (resorcinphthaleinanhydride), 2 parts, sodium bicarbonate, 3 parts, in 100 of water; any ulcer will be stained a brilliant green color. Oblique illumination is useful to find punctate deposits on the porterior surface of the cornea, often the only signs of a cyclitis. Pagenstecher's ointment of the yellow oxide of mercury is by no means the panacea it is thought to be, but it is valuable in phlyctenular conjunctivitis, strumous or superficial keratitis, blepharitis, and to

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aid in the clearing up of corneal opacities when the eye is free from inflammation.

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## COMMON PRESCRIPTION MISTAKES.

Fred Dunn, in the *Optical Journal and Review,* admonishes that errors in prescription writing cause loss of time, money and patronage, and while the present time yields fewer errors than a few years hence, yet there constantly appear many errors in the prescriptions received by any wholesale house supplying prescription work to the trade.

Your prescription should be written positively; there should be nothing, absolutely nothing, left for the wholesale house to determine. When you order a finger-piece mounting, with 15 millimeters between posts, 00 eye, and P. D. of 2¼", you should know that the two do not coincide, but that you have a P. D. of 27/16", ordering 0 eye or 00 eye short oval will decrease the P. D. 1/16". You are still ⅛" wide, and with weak convergence your results would be very likely unsatisfactory. The observer would pronounce it unskilful, and loss of prestige follow.

One very common mistake is to order a pair of rimless eyeglasses, and, when received, remember a hole for cord was wanted. You refer to your prescription, and find that it was not ordered. The leaving out of one or more signs, omitting the axis on one or both lenses, marking the sphere plus and the cylinder minus when both were intended for plus; also omitting the size of eye, are errors of frequent occurrence. Careless penmanship and poorly written figures are responsible for much trouble. In using 5/10 sometimes, by being hasty or otherwise, the decimal point is placed after the figure, and of course a 5 D. lens is received from the factory. If the cipher had been added, the chance for error would have been less.

There are many who prescribe bifocals in the old way; that is, the center of the lower directly under the center of the upper, when centered at all. One center must, therefore, be wrong. If the distance P. D. is correct, and we assume that it is, it is obvious that you are prescribing prisms, base out, for reading, something to be avoided generally. Also in writing a prescription for bifocals, be sure and say in the reading column if total, or else added. For instance, a prescription is received plus 1 upper, plus 2 lower, and nothing more given but the size of the eye. What will the factory do? Prescription, of course, is marked "rush." Does the prescription maker want a total of two, or two added, making a total of three? Do not overlook that part in writing prescriptions for bifocals.

In writing prescriptions for spectacles, a very common error is to omit base of bridge. Of course, if you use the letter system of bridge measurements, together with size of eye and P. D., that is sufficient; but otherwise, you should never omit this measurement. All frames have a bridge angle of 45°, and if other angles are needed, measure carefully and so state. Another error by some is to pay no attention to length of temple. This should be looked over carefully; your patient's comfort demands it.

### Use Separate Rx Blanks.

A separate prescription should always be made for each individual prescription. Sometimes two pairs of the same kind are desired. It is better to make two prescriptions rather than write on the bottom of one, "two pairs wanted." Stock goods are sometimes ordered on prescription, and it should never be done; it is liable to be overlooked, and, if found, must be copied by your jobber, and sent through the proper channels in the proper manner.

Nothing should be ordered on a prescription blank that does not pertain to that particular prescription. The blanks are made for the purposes intended, and your jobber will be pleased to send you all that your just wants require; and, lastly, always reread your prescriptions before mailing.

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# THE SICK ROOM.

## SLEEP FOR CHILDREN.

SOME remarkably interesting treatises have been recently published relating to the scientific phenomena of sleep, says the *Western Medical Review*. The authors of these works, while agreeing in the main with the efficacy of "sleep as nature's sweet restorer," still hold the opinion that too much sleep is decidedly harmful, and that the majority of people indulge in the habit to a greater extent than is good for their health. Their views, as expressed on the subject in regard to young children, are both instructive and novel, and in brief are somewhat as follows: that even infants at the breast are allowed too much sleep; that they need not only time to sleep but time to wake if their intellect is to be awakened. The tendency to sleep shown by children and the uneducated is explained on the ground "that their psychic world is so poor that it is almost impossible for them to take any interest in their own thoughts and ideas. It is argued that even during the first four or six weeks of life there ought to be two waking hours during the day, and as the baby grows the duration of wakeful period should gradually increase. All methods of putting children to sleep artificially by means of monotonous sensations are strongly censured, including the crowing of lullabies and the rocking of babies in cradles or simply in the arms. Rocking the child in the arms or cradle is said to produce sleep partly because consciousness is fatigued by a series of monotonous sensations and partly because at the same time artificial anemia of the brain is provoked. Finally the approximate period of sleep necessary for children at different ages is given. Between the ages of one and two years there should be from six to eight waking hours; between two and three years, seven to nine waking hours; between three and four years, eight to ten waking hours; between four and six years, twelve to fourteen waking hours; between nine and thirteen years, fourteen to sixteen waking hours." There is much common sense in the foregoing remarks, but there is also a tendency to rather unduly press the point as to the harmfulness of oversleeping, particularly in the case of very young infants. Rocking a child in the cradle to any great extent is doubtless harmful, but it is difficult to understand in what manner the "crowing of lullabies" can affect the health of a baby. It is also no easy matter to fix the amount of sleep that a person—child or adult—should take by any hard and fast rule; a large degree of latitude must be allowed in this respect, as it is an absolute fact that individuals of different temperaments and constitutions require varying periods of sleep.

## HOW TO EXERCISE.

Look at the city dog or the city horse—if any still exists, says Wm. Hemmingway, in *Harper's Weekly*. Let these animals be pampered, full-fed and kept from work or play, and they become fat, indolent, decrepit, short-lived. They must have exercise really to live. It need not be the rigorous task of the foxhound or the coursing greyhound, or the hard drilling of the thoroughbred racehorse in training. But a reasonable amount of exercise they must have in order to live. So with the city man, the brainworker, the man of sedentary occupation. And inasmuch as "man," of course, "embraces woman"—as the philosopher said—it follows that she, too, needs reasonable exercise if she would

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live at her best. But the reasonableness of the exercise must never be forgotten. It would be suicidal folly for the hard-working business man or practitioner of a learned profession to box ten rounds a day with a pugilist at top speed or to run a mile at his best pace or to play three fast sets of tennis. Yet three or four rounds a day, or six rounds every other day, at moderate speed with, say, a couple of minutes' brisk mix-up at the finish; or a pleasant, jogging run, or a set of tennis daily or six sets distributed over a week, would do wonders in keeping the busiest sedentary worker full of the joy of living and doing, and out of the hands of the doctors.

Preferably man should take his physical exercise as play. A pleasant swim of fifteen or twenty minutes' duration, a swift stroll with a friend or two over five or six miles, a lively game or two of squash or tennis or handball—any one of these will do a man more good than hours of monotonous mauling a punching-bag or pushing dumb-bells. The mind, the soul itself, is benefited by play, while the bodily functions are strengthened by the physical work in the game.

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### THE DIGESTIBILITY OF CHEESE.

The *Therapeutic Gazette* thinks it is generally held by the profession that cheese is not a particularly digestible article of diet, but that it is generally recognized as offering a cheap and exceedingly nutritious foodstuff. Our attention has been called to this matter by a recent publication of the Department of Agriculture, Circular 166, Bureau of Animal Industry, in which a careful study has been made of this subject, the report being given us by Doane. Careful investigations were made in regard to the different kinds of cheese, and studies were made upon human beings to determine the digestibility and nutritive value of various cheeses. Doane believes that the cheapness and digestibility of cheese will lead to its being employed in larger and larger quantities; that it is a very healthy food, and is particularly advantageous to the laboring classes, this holding true in regard to all kinds of cheese. Comparing its nutritive value with other highly nitrogenous food materials, he points out that no kind of meat, excepting dried beef, carries such a large percentage of proteid as cheese, and even dried beef contains a much greater percentage of water; fresh beef, weight for weight, has little more than one-half the food value of cheese in either protein or fat, and this holds true practically of all fresh meats, except bacon or fat pork, but their food value is mostly fat, which can be, and is, replaced to a great extent by the carbohydrates of vegetables at small cost. He points out, finally, that there was an absolute lack of any disturbance of the general health of the persons who used cheese in large quantities in the experiments reported in this Bulletin, and furthermore, that those peoples who rely largely upon cheese as an article of diet are noted for athletic attainments and physical endurance.

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### THE SALT SHEET IN REDUCING NIGHT SWEATS.

Dr. T. H. Whiting of Rockford, Ill., tells of a remedy that will relieve night sweats which he considers the treatment par excellence. He continues: "I have tried many remedies, but that which follows, called 'Salt Sheet,' prepared by immersing the sheet in a solution of chloride of sodium, is far superior. Make the solution just strong enough as to taste the water slightly salt. Then dry the sheet thoroughly; then wrap it next to the skin on retiring for the night. It will reduce fever and induce sleep. I have succeeded with it when all other remedies failed."

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### LAVAGE AND MASSAGE-LAVAGE OF THE COLON.

J. Baumann makes a rectal injection of about a pint of fluid, which is injected

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at once. This is followed by a second injection of about a quart. The patient then reclines in the dorsal decubitus and the physician, at his left, massages the fluid up into the colon and spreads it around with gentle manipulations. After massaging against the normal current, he massages then with it, the superficial effleurage toward the anus starting the bowel content in its natural course and regulating peristalsis. This procedure should not be often repeated or the bowel may become accustomed to it, and it should always be done very gently, never hurting the patient.

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### KNITTING AS A NERVE CURE.

It is told of Robert Louis Stevenson that one of the many things he learned to do to keep him amused when he was restless or ill was to knit.

"My prescription, madam, is that you knit two hours daily," said the physician.

"Knit!" exclaimed the nervous patient. "Why on earth should I knit?"

The doctor replied: "Because nothing is more soothing to the nerves; because nothing induces to such a calm and cheerful frame of mind. I could prescribe valerian for you, but knitting will be better. It will do you much good. I believe that a month of it will cure you."

He went on to explain that his attention had been called to an article in a medical journal on the beneficent effects of knitting, and he had prescribed the treatment, with excellent success to a dozen women.

"The shining needles," he said, playing swiftly among soft colored silks and wools, engage the eyes pleasantly, and fill the mind with cheery and sane thoughts. At the same time they may produce admirable things—golf waistcoats, golf stockings of wool, delicate evening stockings of silk, shawls, a hundred articles."

The woman smiled, and said she did not know how to knit, but she would learn at once.

### MYSTERIES OF SLEEP.

The *London Pictorial* tells us that many curious facts have been recently discovered about it by the world's savants. For instance, when we sleep the lower half of us weighs more than the upper half. The brain is lighter and the legs are heavier. Experiments have shown that if a man goes to sleep on a bed suspended exactly at the middle point of his weight his head begins to tip slowly up and his feet to go down. This is due to the fact that when we sleep the blood in the brain goes off to the other parts of the body. The moment the brain wakes to life again it draws the blood back.

It happens when one is fast asleep some part of his brain or several parts of it may at the same time be awake. A man may walk, talk, sing or solve mathematical problems, and yet at the same time be safely in the land of nod.

It seems hard or impossible to decide what part of the brain does sleep. Our sense of time, for instance, is stronger when we sleep than when we are awake. Experiments conducted some years ago on a number of men and women between the ages of 20 and 30 showed that 60 per cent. of them were able to wake up in the morning at any time they had decided upon the night before. As the *Pictorial* expresses it, the resolve seems to wind up something in the subconscious brain, and when the hour has arrived the clock gives in some mysterious way the alarm and the eye-lids open.

Another curious fact about sleep is that the further the part of the body is away from the brain the less soundly it sleeps. A touch on the toe will awaken one much more readily than a touch on the shoulder.

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### THE USE OF WATER IN HEALTH AND DISEASE.

There is no doubt that, as a rule, the majority of people do not take enough pure, fresh water internally. Many more

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or less severe diseases, not excluding tuberculosis, have their origin in an impaired digestion. Often due to chronic constipation. There is no better remedy for this prevalent affliction of ordinary constipation than the judicious use of water. To take two glasses of fresh water in the morning before breakfast, not all at once, but in three or four portions, during the half hour just before eating the morning meal, and in addition to this, a few glasses during the day, not at meal time, but an hour or two before or after, will certainly greatly help to combat a tendency to habitual constipation. Water is particularly beneficial if taken about a half hour before retiring. Water cooled by placing a bottle of water in the ice-box or by surrounding it with ice, or cooled simply by placing it outdoors in cold weather, is always to be preferred to so-called ice-water, which the average American likes so well.

The daily use of water not only keeps the body clean, but is the means of strengthening the nervous system, thus increasing the natural resistance to disease. Begin with a child from the tenth to the twelfth month, and gradually accustom he or she to the use of cold baths. The best way to begin is after the daily warm bath, to rub the child a few times with the hand dipped in cold water and then dry him rapidly; sooner or later a cold sponge bath may be given, and eventually a little douche or spray. It is absolutely necessary in the use of cold water that the reaction shall follow rapidly. This reaction is manifested by a pleasant warmth perceived by the child, and is made visible by a reddish appearance of the skin.

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## THE CONSTIPATION MONOMANIA.

J. F. Goodhart, in the *Pacific Medical Journal,* reminds us that men and women were not born into this world for the one supreme object of procuring a daily evacuation of their bowels, as so many seem to think. Nor do I believe, he continues, that "the instinct of death" hovers over those who do not realize this seemingly revivifying hope. It is obvious that, although we have no certain knowledge of what Adam did, a habit has been gradually formed that largely owes itself to convenience. But some there are, nay many, whose natural rythm is a two or three day one. Even a weekly interval is by no means so very phenomenal, without ill health; and, personally, I make bold to affirm that there is many a one with a small appetite who would be in much better health if he or she accepted a habit of some days' interval and kept themselves meantime unharrassed by aperients. (There are many *constipated* who are *very healthy*) and there would be thousands more so if, instead of assuming disease because they are constipated, they called themselves healthy and ceased to self-centre. And this large group seems to me to hit hard the doctrine of intestinal autointoxication. Carried to the extent that it has been of late years, I cannot but think it unsound and baneful. I will go further, and say that the treatment of the supposed condition by so-called intestinal antiseptics has seemed to me decidedly inconclusive; and as to surgical measures for its relief, based as I believe them to be, upon unsound principles, except for the relief of quite occasional organic results, they are destined to fall into oblivion. I quite admit that "the intestinal flora," as I see is the vogue just now, may not be all that is desirable, but in the neighborhood of a stercorin factory one can hardly expect the wilderness to blossom as the rose. Nay, more, if it were to do so, one might confidently predict that the departure from the normal would be so wide that death would be lurking in the bushes.

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## DRINKING WATER.

Alida Pattee, in her standard work on Dietatics, thus discusses the various

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preparations of water for drinking purposes:

*Boiled water.*—Water simply sterilized by boiling and kept in bottles in a cool place is extensively used when there is suspicion as to its purity. It is rather unpalatable. Boiling renders harmless all the organic impurities and precipitates the salts of lime. It must always be borne in mind that typhoid fever, cholera, dysentery, and other pestilences are largely water-borne diseases, and whenever there is any suspicion that water is contaminated, the most available method for purification is boiling. Before filling the bottles have them thoroughly cleansed and rinsed with boiling hot water, as a few drops of unboiled water would be sufficient to contaminate the whole. To prevent breaking, place bottles in pan of warm water before pouring in the boiling water.

*Distilled water.*—This is water in its purest state. It is said by many authorities to be unsuited for a beverage because of total absence of mineral matter and gases, on account of which mineral matter is greedily abstracted from the walls of the stomach, thereby causing congestion and irritation. It is generally used for medicinal and chemical purposes. If employed as a beverage it should be aerated to improve the flavor.

*Carbonated water.*—Ordinary water may be artificially charged with carbon dioxide, as soda water, etc. Among the most common carbonated waters (naturally charged) are vichy, apollinaris, and seltzer (effervescing waters) and Poland (uneffervescing). These are valuable in case of fever and to tempt people to drink more water; also in relieving nausea and vomiting. They are used to advantage with acid drinks and to dilute alcoholic liquors. Carbonated water of any kind should not be taken in excess, as such waters are apt to produce indigestion, by retarding the action of the gastric juice.

Alkaline mineral waters are carbonated (naturally charged) and differ from ordinary water in the greater amount of gaseous (carbon dioxide and sulphuretted hydrogen) and solid matter (sodium chloride, potassium, magnesium, iron, sulphur, etc.), which they contain. Some mineral waters have no medicinal value, and are simply used for quenching thirst; others have purgative, laxative, or diuretic effect. The following are a few examples of the latter class: Sulphur Springs, Saratoga, Vichy, Hunyadi, Londonderry, and Lithia waters.

The benefit derived from the water cures so often prescribed is not usually from the water itself, but from the change, treatment, and quantity of water taken. Much benefit can be derived by following the same treatment at home.

*Temperature of drinking water.*—Luke warm or tepid water (65° to 92° F.), which in theory should be most suited for drinking, is insipid or even repugnant to most people. Hence as a beverage water is either taken warm (92° to 100° F.), hot (100° F. and over), cool (65° to 92° F.) or cold (32° to 65° F.) The taking of hot water in large quantities has been found of benefit for weak digestions and in much chronic invalidism. It acts as a stimulant to gastric digestion; relieves thirst more quickly than cold water; is more quickly absorbed, and leaves the stomach sooner. Cool water is the normal beverage for quenching thirst. Ice water is unsuitable for all individuals when overheated, and with meals for dyspeptics and those in delicate health. Fever patients, however, may take it *ab libitum;* for most robust individuals who crave it with or without meals it seems to do no great harm, if taken slowly and in moderation. Its coldness acts as a natural check against overindulgence. It probably slows the movements of the stomach and as long as

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the stomach is chilled the action of the pepsin is curtailed, since this acts best near blood temperature, but the arrest is only temporary. A small quantity of crushed ice is known to relieve nausea.

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## ON CLEANLINESS.

JOSEPH ADDISON.

Cleanliness may be recommended under the three following heads: as it is a mark of politeness; as it produces love; and as it bears analogy to purity of mind.

First, it is a mark of politeness; for it is universally agreed upon, that no one undorned with this virtue can go into company without giving a manifest offense. The different nations of the world are as much distinguished by their cleanliness as by their arts and sciences. The more they are advanced in civilization the more they consult this part of politeness.

Secondly, cleanliness may be said to be the foster-mother of love. Beauty commonly produces love, but cleanliness preserves it. Age itself is not unamiable while it is preserved clean and unsullied; like a piece of metal constantly kept smooth and bright, we look on it with more pleasure than on a new vessel that is cankered with rust.

I might further observe, that as cleanliness renders us agreeable to others it makes us easy to ourselves; that it is an excellent preservative of health; and that several vices, destructive both of mind and body, are inconsistent with the habit of it.

In the third place, it bears a great analogy with purity of mind, and naturally inspires refined sentiments and passions. We find from experience that, through the prevalence of custom, the most vicious actions lose their horror by being made familiar to us; on the contrary, those who live in the neighborhood of good examples fly from the first appearance of what is shocking, and thus pure and unsullied thoughts are naturally suggested to the mind by those objects that perpetually encompass us, when they are beautiful and elegant of their kind.

In the East, where the warmth of the climate makes cleanliness more immediately necessary than in colder countries, it is a part of the religion; the Jewish law (as well as the Mahometan, which in some things copies after it) is filled with bathing, purifications and other rites of the like nature; and we read several injunctions of this kind in the book of Deuteronomy.

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## CITIES HEALTHIER THAN RURAL COMMUNITIES?

In the so-called "good old days," remarks the *Lancet-Clinic*, which in point of time have perhaps passed us only a decade ago, so fast are we seemingly traveling in this rapid age, much comment was made on the salubriousness of country habitations. People were advised to leave the disease-reeking and germ-infested atmosphere of the cities, and find health in abundant measure amid rustic surroundings. But without going into that deadly dull routine of advancing statistics, with which we can prove anything, that places where many people do congregate are far more conducive to health and longevity than the bucolic regions once so extolled by poets and theoretical farmers. Cities have become far safer places of residence simply because of the presence of health departments, food and dwelling and school inspectors, etc. Sanitary laws are better understood in the centers of population. Prevention is taught everywhere, and when disease is contracted the many hospitals furnish a ready means of treatment, even though it is to the detriment of the average city physician's financial interests. These may be matters of such common knowl-

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edge as to be regarded as platitudes; and yet the disproportion of mortality rate of city and country must be continually reiterated to make rural health authorities, such as they are, sit up and take notice.

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### IS ASPARAGUS WHOLESOME?

We are often asked, says the *Lancet*, whether asparagus is a good thing to eat, and the question may well be discussed now that the season of asparagus is come. Suspicion has no doubt been entertained in many minds as to the wholesomeness of asparagus on account of its producing a well-known peculiar odor in the renal excretion, although there are certain laymen who regard this effect as evidence of a kind of annual spring cleaning of the organism. This effect appears to be due to a stimulus given to protein metabolism and the formation of an organic sulphur body known as methyl-mercaptan, which is produced in the intestine during digestion, whence it is absorbed. There is no evidence showing that this stimulus does harm. On the contrary, asparagus when young and tender is very digestible even for invalids. Though not a powerful source of nutrition, there is very little doubt that its use leads to a true economy of food during digestion or, in other words, to a healthy assimilation of food principles, and more particularly the proteins. It is probable that the peculiar principle asparagin, which contains 21.2 per cent. of nitrogen, is responsible for this action, but asparagin exists also in other vegetables, notably the potato, though the amounts are less than is the case with asparagus. Purin bodies or uric acid producing substances are present in asparagus to an extent which cannot be neglected, and this fact has raised fears in the minds of the gouty and rheumatic. It is probable, however, that the alkaline salts in asparagus and in vegetable foods in general would compensate any uric acid forming tendency and keep the blood sufficiently alkaline to prevent the formation of insoluble urates, besides which asparagus appears to have a mildly stimulating action upon the kidneys. It is interesting to recall that asparagin has been recovered from asparagus and prescribed in doses of one grain three times daily for relieving dropsy associated with disease of the heart, and a syrup of asparagus is employed medicinally in France, while at Aix-les-Bains the eating of asparagus at one time formed part of the cure for rheumatic patients. So far, therefore, as the question has been investigated, the evidence obtained appears to give little support to the idea of asparagus being an objectionable article of the diet, and its estimable qualities of taste and flavor may continue to be enjoyed without offense to physiological exactions.

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### THE BELOVED PHYSICIAN.

A century's half of honest toil,
The record lies where all may read,
The years so free from stain or soil
So rich in noble work and deed.

A century's half not spent for gain,
But spent in ministries to man,
Who heals the sick, who soothes the pain,
Succeeds to work which Christ began.

No greener laurels grace the brow
Of soldier, hero, prince nor bard
Than those with which we crown him now,
Who deemed no path of duty hard.

No fear of pestilence deterred,
No dread of sword, of shell nor ball,
He simply went where'er was heard
Of human need and woe the call.

The crescent years look down today
On many valiant deeds of love.
"Well done! O, kindly heart," we say,
"Well done!" the Christ will say above.

—*Bishop Tucker.*

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# MEDICAL PHARMACY.

## DIFFICULTIES IN EVERY-DAY DISPENSING.

**(Continued).**

WE continue in this issue our reproduction of Mr. Wyatt's report at the Liverpool Chemists' Association upon difficulties encountered in every-day dispensing.

(6) A catheter oil containing 4 grains to the fluid ounce of nitrate of silver was asked for by a doctor, and a satisfactory one turned out with the subjoined ingredients:—

Nitratis Argenti.....4 grains
Sp. Vini Rect.....3iss.
Olei Ricini.....ad fl.3j.
M. ft. Solutio.

(7) An eye ointment of the following composition proved extremely irritating:—

Hyd. Ox. Flav.....2 grains
Cocainæ Hydrochl.....2 grains
Acidi Borici.....4 grains
Vaselini Flavi.....3iv.
Ft. Ungentum.

Thinking that the irritation might be caused by traces of mercuric chloride being formed, cocaine alkaloid dissolved in castor oil, mxx., by aid of heat was used instead of the hydro-chloride and mixed with the other ingredients on cooling. There was no further complaint about the prescription.

(8) A cachet of aspirin and iodide of potassium became much discolored owing to liberation of iodine, and this staining the starch of the cachets blue:—

Aspirin .....8 grains
Potass. Iodidi.....2 grains
Ft. Cachet.

The ingredients were powdered and well dried, and the cachets were made with two covers each. One lot of these kept well during a trip to the West Coast of Africa because they were carefully stored, whilst another lot sent into Wales came back in a pitiable condition. The only way to make such a powder at all permanent is to rub the ingredients up separately with a small amount of cacao butter, and then granulate and mix together, compressing lightly into the cachet.

(9) British customers invariably grumble at being asked to take a cachet, and though capable of swallowing an adult oyster the average person takes fright at a simple No. 1 cachet. The prescription given here was made up in a No. 1 bis cachet by using the handy little compressor I introduced to your notice several years since:—

Pyramidon .....8 grains
Salicin .....8 grains
Ft. Cachet.

Previously they had been sent out in a No. 2.

(10) Capsules of calcium permanganate were made as follows:—

Calcii Permanganatis.....¼ grain
Ft. Capsula.

The permanganate was rubbed down with enough French chalk to make a 2-grain powder, and this was put into a hard gelatin capsule.

(11) An unusual form of medication in capsule form was:—

Strychninæ Sulphatis.....1 grain
Extract Digitalis.....5 grains
Magnesiæ Ustæ.....20 grains
M. ft. Capsul. No. xx.

Such ambiguously written prescriptions are by no means as uncommon as they deserve to be. At first sight one might take the amount given to be for one capsule instead of for twenty. There is no excuse for such slackness in the directions to the pharmacist, and a medical man who by such means causes a dispenser to make a serious error is just as culpable as the dispenser. The powders were well triturated with enough sugar of milk to make up to 40 grains, and put into No. 3 hard capsules, 2 grains in each.

(12) The dose of prussic acid in this prescription is high, but was dispensed, as previous amounts from 3 minims up

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had been sent out for the same patient:—

Pepsinæ Porci.....3ij.
Aoidi Prussici Dil.....3iss.
Glycerini .....ʒss.
Aquæ .....ad ʒvj.
M. ft. Mist. Sd. ʒss. quartis horis.

(13) At first sight one might conclude that the acid had been inadvertently left out of this formula:—

Quininæ .....4 grains
Ext. Glycyrrh. Liq.....3iv.
Syrupi .....ad ʒij.
M. ft. Mist. 3j. tert. horis.

It is intended to give the quinine alkaloid well rubbed down and suspended in the syrup to mask the bitter taste. Replace part of the syrup with an equivalent amount of water and rub the quinine down with this, and, lastly, add to the rest of the ingredients.

(14) Somewhat large pills made to the following prescription were reduced considerably in bulk by substituting powdered chamomile flowers for the extract:—

Ext. Aloes.....1 grain
Pepsini .....1 grain
Ext. Nucis Vom.....½ grain
Acidi Carbolici.....½ grain
Ext. Anthemidis.....q.s.
Ft. Pilula.

Chamomile flowers in powder make a good absorbent powder for pill massing, being lighter than and as absorbent as liquorice powder.

(15) A correspondent of mine recently sent me a pill to try from:—

Ferri Iodidi.....3 grains
Ext. Gent.....1 grain
Ft. Pil.

None of the samples of iodide my friend procured came up to his notions of perfection, and even those he had tried only resulted in pills of 5 to 8 grains in size. To begin with, I made the ferrous iodide mass of the Codex, using:—

Iron Wire.....40 grains
Iodine .....80 grains
Water .....q.s.

Allowed to react, and when the froth became white, I turned the iodide solution out into an evaporating dish with 3 drops of the Codex hypophosphorous acid, washed out the bottle with a few drops of water, evaporated down on a water-bath to a thick syrup, and then massed with tragacanth powder, 4 grains, and powdered gentian, q. s. to a mass weighing 192 grains, which I cut into thirty-two pills. These were then rolled well in graphite powder and afterwards varnished, a good pill resulting.

(16) A pill containing terpinol:—

Terpinol .....1½ grains
Sodii Benzoatis.....1½ grains
Ft. Pil.

This became very soft when massed with liquorice powder and compound tragacanth powder, but made with wax gave a good mass. Theoretically wax should not be used except the other ingredients of the pill or suppository are very soluble; in this case the benzoate being easily soluble would cause the pill to disintegrate rapidly. An alternative method if wax be objected to is:—

(a)
Terpinol (weight).....1½ grains
Sod. Benz.....1½ grains
Kieselguhr .....½ grain
Saponis Duri.....½ grain
Ft. Pil.
(b)
Terpinol (weight).....1½ grains
Sodii Benzoatis.....1½ grains
Ceræ Albæ.....½ grain
Saponis Duri.....½ grain
Ft. Pil.

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## CARBOLIC ACID AS A POISON.

The *Therapeutic Gazette* calls attention to an article by a well-known British toxicologist, in which he pointed out that carbolic acid was not commonly placed amongst the legal list of poisons, and for this reason could be obtained with the greatest ease by any one who wished to use it for the purpose of committing suicide, its strong odor and other characteristics making it a remedy which did not lend itself to aid an intending homicide. Notwithstanding the statement which was made at that time in regard to the need of placing carbolic acid or phenol in the legal list of poisons, and thereby controlling its sale, little or nothing has been done, with the result that it is still very commonly employed by suicides. Perhaps it may be said with truth that it is more frequently used than any other drug for this purpose.

These views are confirmed in an in-

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teresting paper by Dr. Cleghorn, who contributes an article entitled "Suicide by Poison: a Plea for the restriction of the Sale of Carbolic Acid" to the *Long Island Medical Journal* for January, 1911. As he well says, hardly a day passes without one or more cases being reported by the daily press of suicide attempted, or accomplished, with the agency of carbolic acid, and this wide dissemination of the knowledge of its lethal properties is, of course, responsible for its use as a poison by increasing numbers of persons.

Carbolic acid is capable of producing death in some cases with a suddenness almost equal to that of the cyanides, while in others it is more slow in its action, but nevertheless it often produces conditions from which recovery is impossible. These facts certainly place it at the top of the list of death-dealing substances. Yet, as Cleghorn says, the average druggist can sell carbolic acid as freely as he does soda water. Cleghorn provides a statistical table showing deaths by poison for the last sixty years in England and in New York county and city. It is interesting to note that in 1890 out of 63 suicides in New York from all poisons, carbolic acid only caused five of these deaths, but in New York City in 1900, out of a total of 622 suicides due to poison no less than 292 were due to this agent.

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## EMOLLIENT SKIN CREAM.

According to the *Practitioner*, quoting from *La Clinique*, the cold cream usually prescribed [in France] is generally made up as follows:

| | |
|---|---|
| Lime water | ℥i. |
| Rose water | ℥ss. |
| Petrolatum | ℥ss. |
| Wool fat | ℥i. |

M. Ft. cremor.

Carle, of Lyons, considers that this prescription has several drawbacks. There is not enough water, it does not incorporate well, the lime water is sometimes irritating, and the proportion of wool fat is too great. He therefore proposes the following alteration so as to obtain a preparation that can be used in all irritations of the skin:

| | |
|---|---|
| Rose water | ℥ii. |
| Wool fat | ℥ss. |
| Petrolatum | ℥i. |

M. Ft. cremor.

This may be scented with any desired perfume, say one drop of oil of geranium, three drops of terpineol, or two grains of balsam of Peru.

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## AN OINTMENT FOR COLDS.

The *Medical Council* gives the following formula with the statement that the writer has long employed it locally in colds of the nose, throat, or chest:

Mutton suet,
Lard, aa 1 teacup;
Gum camphor, ¼ to ½ ounce;
Spirits turpentine,
Ammonia water mild, aa 3 tablespoonfuls;
Oil nutmeg, 1 tablespoonful.

The latter may be omitted. Some preferred to add, also, two ounces of onion extract. The above ingredients were mixed thus:

Put the tallow and lard on stove until hot. Add camphor gum; when dissolved, take from stove and let cool a little; then add the rest of ingredients and beat until cold. Put in jars or tins with lids on.

Hold in hand until warm, and apply with warmed hands, running in well over bridge of nose, the neck, or the chest. Where convenient cover with old flannel.

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## TOOTH PASTE.

The *Physicians' Drug News* gives the following formula for a good tooth paste that can be put up in collapsible tubes:

Chalk, magnesia and soap are among the first necessaries for the manufacture of a satisfactory cream or paste, and a simple composition of these with glycerin added in the proper proportion, will yield a paste that will not readily separate. However, a finished formula is what is desired, and we give the following:

| | |
|---|---|
| Powdered soap | 2 dr. |
| Powdered talcum | 4 dr. |
| Calcined magnesia | 4 dr. |

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Precipitated calcium carbonate.....4 dr.
Precipitated calcium phosphate.....4 dr.
Solution of carmine, N.F.....q.s.
Glycerin .....q.s.
Oil wintergreen.....3 drops
Oil sassafras.....3 drops

The powders should be intimately mixed in a mortar and sieved repeatedly, the more the mixed powders are sieved the finer will be the resulting product. To the mixed powders of the requisite degree of fineness add the carmine solution and incorporate thoroughly with the pestle; pass through a sieve twice. Now add the flavoring oils, and after these are thoroughly distributed throughout the powder begin to add the glycerin—a few drops at a time until a cream or paste of the desired consistency is obtained. A portion of the glycerin is sometimes replaced by a corresponding amount of honey, but honey is not so suitable for use in a paste which is to be put up in collapsible tubes.

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## ADMINISTERING MALE FERN.

The *Lancet* suggests that in cases where liquid extract of male fern cannot be administered by the mouth owing to stomach affections, the remedy may be given in capsules which have been dipped in solution of formaldehyde. This has the effect of hardening the capsules, so that they resist the action of the gastric juice. Other methods are to coat the capsules with keratin or salol, the latter being more suitable for pills. The treatment of tapeworm is thus summarized:

Prepare the patient by dieting; give purgative suitable for removing excess of mucus at bedtime, and if necessary at 7 o'clock next morning; let a dose of the vermifuge be taken at 9 a. m.; wash away the remains of this from the bowel, even if the worm has passed, by castor oil at 11 a. m., and look carefully for the head of the parasite so as to be able to give a certain opinion of the result of the treatment. Magnesium sulphate with tincture of jalap is recommended as a more suitable purgative than castor oil for administration before giving the vermifuge. If it is desired to administer liquid extract of male fern as an emulsion, the following formula gives a good result:

Liquid Extract Male Fern.....1 dr.
Mucilage Acacia.....1 dr.
Cinnamon water to make.....1 oz.

Another equally good preparation may be made by using tincture of senega as the emulsifying agent. Ten minims of the tincture are made up to 1 drachm with water or cinnamon water in a measure-glass, and 1 drachm of liquid extract of male fern is measured on the top of the mixture; the whole is then poured into a 1-ounce vial and well shaken, and when properly mixed the bottle is filled with the water.

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## PHARMACOLOGICAL COMBINATION OF DRUGS.

A discussion at the Medizinische Gesellschaft on the pharmacological combination of medicines brought out some interesting points connected with this subject. Some 1,500 experiments have been made, principally on rabbits. Morphia was combined with all the narcotics of the fatty series, belladonna with urethane, scopolamine with morphia and the narcotics of the fatty series, bromine with the fatty narcotics, the latter by themselves, and, lastly, the alkaloids of opium with one another. As a result it was found that two narcotics given together, when they had the same point of attack, added to each other; when this was different there was not a simple addition, but an increase in potency, which, in the case of combinations of the opium alkaloids, was almost double what might have been expected. If instead of a combination of medicines the same medicine be given and the dose repeated at a short interval (fifteen minutes at most) great augmentation of strength and a more lasting action is obtained with a smaller dose. Hr. Buergi, who opened the discussion, concludes from this that the cells had more time to load themselves with the particu-

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lar substance. Perhaps the cells had several receptors, or various sections of the brain were attacked, so that a double reception took place; perhaps there was also increased sensibility.

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## EMULSIONS.

The *Chemist and Druggist* points out that alkalies can only be used for substances containing an acid which will form a soap—e. g., lin. ammoniae, lin. calcis, and lin. hydrargyri.

Yolk of Egg is a remarkable emulsifying agent of great antiquity. The yolk of an ordinary egg is equivalent in emulsifying power to 2 dr. of gum acasia or 15 grains of tragacanth. The separated yolk is rubbed smooth and the oil added by degrees, thinning with a little water as the mixture thickens. This agent is the best one for cetaceum after it has been powdered with the aid of a little rectified spirit.

Saccharated Casein keeps well and gives perfect and stable emulsions which are palatable and easily supported by the stomach. To prepare casein, ammonia solution (about 2½ oz.) is added to a gallon of milk, and after standing twenty-four hours the lower liquid is drawn off and the casein precipitated with acetic acid. The magma is collected, washed, and strongly pressed, and then triturated with 10 grains of sodium-bicarbonate, finally adding sufficient sugar to produce a powder containing, when dry, 10 per cent. of its weight in casein. Casein of commerce may be used if mixed with 15 per cent. of bicarbonate of soda, and rubbed down with water in a mortar until effervescence ceases, the magma being mixed with sufficient powdered sugar and dried below 90 deg. F., and powdered. Resins, oleoresins, and substances soluble in alcohol are emulsified in the bottle by adding sufficient alcohol to dissolve, then mixing and shaking thoroughly with the saccharated casein (2 parts to 1 part of resin) dissolved in an equal weight of water, lastly gradually adding the remainder of the water and other ingredients with continual agitation. With fixed oils a mortar is necessary.

Condensed Milk (unsweetened) is an excellent emulsifier, especially suited for cod-liver or castor oils, being merely a case of incorporating the oil gradually in a mortar with an already perfectly formed casein emulsion.

Tinctures of Quillaia and Senega contain "saponins" which possess powerful emulsifying properties. The troublesome male-fern extract is easily emulsified with half its volume of tr. quillaiae, while 20 minims of the tincture is sufficient for 1 dr. of chloroform, and turpentine works well with its own volume. Quallaia and senega are useful emulsifiers of oils in the presence of acids.

Seed Emulsions (linseed, poppy, hemp, etc.) are made by crushing and rubbing with water, the mucilage in the seeds being the suspending agent. Almonds are first blanched, then dried and powdered before beating into a stiff paste with a little water. Water is then added by degrees. The finished emulsions are strained.

Irish-Moss Mucilage is prepared by digesting ¼ oz. of washed moss in 24 fl. oz. of water for an hour, boiling for five minutes, and then straining. It has long been used on a manufacturing scale for preparing cod-liver oil emulsion, but it is seldom used in the dispensary.

What Emulsifying Agents are Permissible is a question on which there is much diversity of opinion. Acacia and tragacanth have no medicinal value except as demulcents, and it is generally agreed that there is no objection to their use as emulsifiers on the score of physiological action. Liq. potassae is a caustic, and should not be used unless specially ordered, but the dispenser is justified in using egg-yolk. Saccharated casein should not be used unless so directed, as the prescription may be for a diabetic patient, but unsweetened condensed milk is permissible. Tr. quillaiae and tr. senegae should not be used unless ordered.

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# CORRESPONDENCE.

## TREATMENT OF BURNS.

Editor MEDICAL BRIEF:

Whenever I read on this subject as I read in the June number of your esteemed journal I am disappointed not seeing mentioned what I have published on the subject repeatedly. One of my papers appeared even in the *Journal of the American Medical Association* of September 29, 1906, from which journal you have quoted Dr. Haldon Sneve's article which had appeared in July, 1905, and which describes a complicated painful and inadequate method. Permit me to repeat what I have said exactly one year ago in the *Therapeutic Record*.

The ideal treatment of such cases is the continuous warm water bath.

On September 14, 1857, a fire broke out in the pyrotechnical laboratory in Frankfort on the Main. Of twenty persons burned, seven had perished in the flames or died from inhaling obnoxious gases. Among the thirteen remaining who were taken to the hospital, different degrees of combustion presented themselves. All these cases were treated by Dr. G. Passavant and all except those with burns on the head alone were given the continuous warm bath according to the extent of the injury—the partial or the full bath. This is the first record I can find in literature of treatment of burns by the continuous warm water bath.

We see Passavant has treated extensive burns with the continuous bath before the year 1857! his first publication of the method appeared in the year 1858. Strange to say, Hebra writes in the *Allgemeine Wiener Medizinische Zeitung* (1861 No. 40): "The continuous full bath given for therapeutic purposes and kept up for days, weeks and months has, as far as I am aware, never been tried or carried out by any one." He does not mention Passavant, whose article appeared in the best known German medical journal of that period, namely the Deutsche Klinik, 1858, Nos. 36, 38 and 39. In the text books—and I have examined a great many—Passavant is not spoken of either, but all credit of having introduced the method is given to Hebra.

The action of the continuous bath is manifold. It gives almost immediate and even complete relief from pain and can be considered as the most excellent anodyne. Even if it offered no other advantages, it would be of great value on account of this soothing effect, when the pains are most excruciating. Another advantage of the warm water treatment is that the water penetrates the burnt tissues, in consequence of which they remain moist and soft. Without the immersion the cuticle which has been destroyed in its whole depth would harden and form an impenetrable cover over the underlying parts. Immersed in water, tissues which have become gangrenous can not dry up, but remain moist. They detach themselves easily and are washed away after having become detached. Thus the wound is constantly kept clean. There is no accumulation of pus, no crusts of dessicated wound secretion and, which is most essential, no dressing is required. The patient has not to suffer the often painful procedure of change of dressing. Langenbeck, who in the year 1850 introduced continuous immersion as a method of treating surgical wounds, characterized it as the mildest method, not requiring dressings, securing clean wounds in a way which could not be surpassed by any other method.

The most essential advantages of the

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continuous bath in case of burns are those which we understand from its physiological action on circulation and innervation in general. The principle in using the continuous warm bath is to eliminate the products of inflmamation and infection.

The warm bath, while it surrounds the surface of the body with an equally tempered medium, does away with fluctuation as to space and time of the loss of heat, and thus acts soothingly. The thermic irritation of the peripheric nerve ends, while it lessens the sensation of pain, excites at the same time by way of reflex action, especially in the muscle, an increased metabolism. The fatigue or exhaustion of muscles is caused by more than normal accumulation of the products of their function. To oxidize and eliminate these products a certain amount of metabolism is required. The specific effect of the warm bath is to afford immediate facility for oxidation.

The changes of the physical and chemical condition of tissues, the augmentation of the organic function, the acceleration of the blood circulation, the dilatation of the blood vessels, all this depends on specific action of the continuous warm bath on innervation. When a part of the body is placed in warm water, the nerve ends of the skin become irritated. This irritation is transmitted to the vasomotor nerves and is followed by dilatation of the blood vessels and, consequently, by acceleration of the circulation. This accelerated blood circulation facilitates the elimination of the products of inflammation and infection, and with the removal of pyrogen substances and toxins through the general circulation, fever will be reduced. The warm bath is a means to stimulate metabolism; at least this is, as we shall see, the case in local affections of the extremities and explains the good results in cerebrospinal meningitis.

Research in the history of the continuous bath as a therapeutic measure shows that its introduction has been ascribed to two German surgeons, Fritz and von Walther, who lived during the latter part of the eighteenth and the first quarter of the nineteenth centuries; others ascribe it to Baudelocque, the great obstetrician of the time of Napoleon I. Baudelocque made use of it in peritonitis. His method was revived by Noeggerath in the German Hospital of New York, but abandoned again after Noeggerath's departure.

The first who used the continuous bath in surgery seems to have been Paulus of Aegina, who lived in the seventh century under the reign of Heraclius, the Byzantine emperor. Paulus had patients operated on for hernia, especially children, submersed in warm water for seven consecutive days in order to prevent inflammatory symptoms.

All these early advocates of the continuous bath, beginning with Paulus of Aegina and later Stromeyer and Langenbeck, in the explanation of the effects of the continuous bath, pronounced, although they did not say the name, antiseptic principles. All who have had experience with it will confess that it is still the most reliable antiseptic in case of extensive burns.

Your readers who are interested in the subject will find more information in my book "Carbonic Acid in Medicine," in which I have devoted a whole chapter to the continuous warm water bath.

A. Rose.

173 Lexington Ave., New York, June 8, 1911.

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# ELECTRO-THERAPY.

EDITED BY NOBLE M. EBERHART, A. M., M. D.
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## X-RAY A DUTY IN CANCER.

SINCLAIR TOUSEY, in the *New York Medical Journal,* makes an impassioned declaration of the physician's duty to give the cancer patient the benefit of X-ray treatment from the beginning, instead of waiting until after a number of operations and the case has become inoperable and hopeless. He hopes to live to see the cause of cancer discovered and with this a knowledge of how to eradicate it from the system, perhaps by prophylactic means, when there is a strong hereditary taint; and by active measures at the earliest intimation of trouble. We are groping in the dark at present, and the most that operative surgery can offer is the more or less complete removal of the tissue in which a local manifestation of this constitutional tendency has taken place. The fact that there are half as many deaths from cancer as from tuberculosis is one reason for believing surgery to be unsuccessful as to the constitutional disease. Another reason is found in the number of patients who seek the X-ray specialist after several operations.

The author believes that a surgical removal of the growth should be performed as soon as possible and that the X-ray should be employed to prevent recurrence. Suitable X-ray treatment before an operation has a strong prophylactic effect in converting lymphatics and glands into fibrous cords and nodules in which the cancerous elements have been destroyed and which will not act as channels for absorption during the operative manipulations.

It makes one's blood boil and then run cold to have a case of cancer of the breast brought in with a story of a number of operations and recurrences covering a period of two years or more and now inoperable and hopeless. Such a case, with inoperable fungating tumor of the mammary region, measuring two by three inches and projecting one inch from the surface of the ribs, was subjected to X-ray treatment, which caused the flattening out and disappearance of the tumor in a month, and left an ulcer which is now only half an inch in diameter. Can any one doubt that this patient's chances for life are less than if the same X-ray treatment had been applied at the earliest stage? Even at this stage X-ray treatment is far from being a mere placebo. In many similar cases referred by Dr. Clement Cleveland, Dr. T. M. Lloyd, and others, the result of X-ray treatment has been to cause healing and disappearance of the local lesion, improvement in health and strength, and restoration to social duties. For a time it has seemed as if the case had lost its malignant character, and more than one surgeon has remarked that the case under his observation had revolutionized his ideas of cancer. After some years, however, such a patient loses strength and dies of internal involvement without the pain, discharge, odor, cachexia which used to make a death from cancer so terrible to the patient and those who loved her. Beginning at this late stage we can hardly even hope for a permanent cure.

Many different observations lead to the belief that the X-ray produces a molecular disintegration in cancer tissue and

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systematic absorption of some substance which has a curative effect far beyond those cells which can be reached by X-radiance in sufficient strength to produce a destructive effect.

Physicians ought to know and ought to let their patients know that the X-ray has a curative effect in cancer and that permanent success is very much more likely if the treatment is begun at an early stage. Another very important thing is to let patients know that they need no longer conceal a growth because of a feeling that the only treatment lies in operation. If they are not able or willing to undergo an operation immediately on their discovery that there is something wrong, they may have X-ray treatment. Improved means of accurate measurement have made this safer and more effective than ever before. It is not even necessary to wait for the growth to show unmistakable evidence of malignancy. It is better for the patient to be cured of a growth without knowing positively whether it would ever have developed into a cancer than to wait for positive evidence with its certainty of systemic involvement.

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## GASTRO-INTESTINAL FLUOROSCOPY.

Skinner's technique of fluoroscopy, as described in the *American Journal of the Medical Sciences,* consists in the use of the Beclere type of apparatus in a totally dark room. The current to the tube is controlled by a floor switch in the primary circuit, which is opened or closed by the foot of the operator. The tube is regulated by a weighted string which operates an adjustment upon the regulating bulb of the tube and is at the right hand of the operator. With the water-cooled tube, regulation is seldom required. We employ a continuous current of water in the tube, after a fashion seen at the Albers-Schoenberg-Haenisch Institute at Hamburg. This consists of a 2-gallon bottle, with a small rubber tubing attached to an outlet in lower segment. This bottle is placed about two feet above the tube. After circulating in the water-cooling compartment of the tube, the water runs off through a second tube to a container upon the floor.

Into the frame of the lead-glass covered fluorescent screen is fitted with thumb screws a piece of plain glass, upon which may be charted the outlines of the bismuth-filled organs and the anatomical landmarks, with blue and red fat-pencils. These charting glasses are readily changed and their markings may be copied later upon thin paper for record. It is poor policy to chart upon the lead-glass of the fluorescent screen, as one will not have time to copy and erase the sketches.

The patient is prepared for the examination by a fast of four to six hours; the removal of the clothing to the hips; metallic markers are placed upon the ensiform and umbilicus; the patient may either stand erect or sit upon a movable bicycle seat, between the movable tube box and the screen.

For the examination there are required bismuth capsules of varying sizes; paste of bismuth, sugar of milk, and water; bismuth in water, and bismuth porridge. We use a fairly thick porridge of cream of wheat, into which 40 to 60 grams of bismuth oxychloride or carbonate is thoroughly mixed. This is the established Riederische Mahlzeit, when flavored with raspberry syrup. We prepare this in a chafing dish at the office or in the kitchen at the hospital.

### Findings.

I. Pyloric Stenosis. (1) Dilatation of the stomach, both longitudinally and transversely. (2) Antiperistaltic waves running from the pylorus to the greater curvature. (3) Interference with the emptying of the stomach, the exit of the food being delayed eighteen to forty-eight hours. Suspicious symptoms which should be noted are: More or less degree of distention of the stomach; weakened peristalsis; food delayed in exit twelve to

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twenty-four hours; adhesions of the pyloric area, which produce a fixed pylorus; pyloric filling defects; absence of any peristalsis at the pylorus, the wave running only from the greater curvature to the prepyloric area. The pyloric stenosis, whether produced by infiltrations and cicatrices about an ulcer or carcinoma, would produce almost identical symptoms. The differentiation can be determined by the stomach analysis, case history, and subjective symptoms.

II. GASTRIC CARCINOMA. Gastric carcinoma presents the following fluoroscopic findings: (1) Irregular filling defects in the outline of the stomach wall. (2) Abnormal peristalsis, there being no waves at the site of the filling defect; or, if the carcinoma involves the pylorus, antiperistaltic waves are seen. (3) Hourglass contraction where there is involvement of the middle portion of the stomach. The bismuth meal or water may be seen trickling through the narrowed lumen. (4) Adhesions of the stomach to adjacent organs, due to perigastric inflammation. (5) The lumen of the stomach is usually much smaller than normal, excepting, when the carcinoma involves the pylorus, we may have a dilatation.

III. GASTRIC ULCER. (1) Filling defects, which are not as irregular in outline as in carcinoma, the filling defect being due more to an irritation of the muscular action than to irregular outlines of mass changes in the stomach wall. This interference with the peristalsis in ulcers of the lesser or greater curvature is interesting. Where the ulcer involves the pylorus we have the additional symptoms previously noted when there is interference with the exit of the food.

## THE X-RAY CHIMERA.

By E. H. SKINNER, M. D., KANSAS CITY, MO.
*(In The Medical Herald.)*

There are so many false ideas regarding the probabilities and possibilities of the X-ray in diagnosis and treatment that it may be well to discuss frankly some erroneous ideas which propagate through ignorance or indifference. To say that the X-ray is dangerous is no more truth than to speak of the danger of the intelligent administration of calomel. Even the more youthful practicians of the present day may recall cases of salivation following the administration of calomel, but we have not noted that such circumstances have aroused much adverse criticism to its intelligent use. We have learned that calomel and other dangerous drugs may be administered with scientific accuracy and precaution.

Likewise, the ill-effects of the X-ray in the early years of its use have taught many lessons. We now know how to protect against ill-effects of the X-ray and we can estimate the treatment dose with a degree of accuracy that eliminates accident.

The honored martyrs who have passed away and those who, though living, carry the scars of scientific interest in the roentgen ray, have contributed the knowledge that will prevent further sacrifice and pain. These men suffered injury before it was realized that there were ill-effects and that it was possible to guard against their inception.

The present agitation should serve to eliminate a large number of tyros who use the X-ray without proper knowledge of the laws of its application and protection. No X-ray should be generated in a tube that is not properly protected with guards to both the patient and operator. No fluoroscopic examination, however brief, should be conducted unless the tube is surrounded with proper materials, opaque to the X-ray, and the fluorescent screen covered by lead glass. The bellows fluoroscope should be discarded, as such a type serves only to promote carelessness and inaccuracy. Fluoroscopic X-ray examinations have a large and growing field in diagnosis, especially of the gastro-intestinal tract. It is hoped that no reports or criticisms, due to inefficient protection or unquali-

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fied X-ray operators, will ever hinder the future application of the roentgen method.

The profession is familiar with many remedies which have been heralded far and wide by manufacturers before their true scientific value had been determined. The X-ray has suffered likewise by the commercial eagerness of manufacturers. The country has been literally flooded with good and bad X-ray apparatus. The purchasers have lacked knowledge of its application, accordingly patient and physician have both suffered. Commercialism has done more than corrupt legislatures; it has harmed the lives and health of the innocent and ignorant.

There have been no ill-effects to roentgenologist or patient, since the knowledge of protection and dosage was established, where the X-ray was carefully and intelligently applied.

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## THE POST-OPERATIVE USE OF RADIANT LIGHT AND HEAT.

There is probably no measure more deserving of general recognition in the after management of surgical cases, says the *Western Medical Review,* than the employment of radiant light and heat. The degree of comfort produced by prolonged applications, made with a fifty candle-power incandescent lamp, having a parabolic reflector, or the larger lamps, over the site of the operation, is remarkable. This application may be either direcently to the surface, immediately following operation, or, as it is usually applied, over light gauze dressings. It should be used two or three times daily on the first and second days after the operation, and to a degree daily until the wound is healed. If this is done, it will be found that there will be very little demand for anodynes in minor operations and great comfort added, with more rapid healing of the line of incision in all cases, than if left, as has been done, to Nature's course. This acceleration of the process of repair is effected through the induction of hyperemia in the tissues. Another effect is to lessen the liability of the formation of scar tissue at the site of the wound. These effects warrant a more general recognition of the value of a measure so simple of application, and so safe in all cases.

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## X-RAY PHOTOGRAPHS IN COURT.

The *Journal of the A. M. A.* cites the Supreme Court of California that in the personal injury case of Kimball vs. Northern Electric Company (113 Pac. R. 156) certain X-ray photographs of the plaintiff's knee were introduced in evidence after two of the medical witnesses had been examined with reference to them. It was contended that the proponents of the photographs failed to introduce proof of their correctness, or that either of the physicians was an expert in such matters. While, perhaps, the examination was not so minute on that subject as one might wish, it did sufficiently appear that the two witnesses and others were present at another physician's office when X-ray plates were made of the plaintiff's knee, and that the photographs introduced in evidence were printed from those plates. While it would have been better, no doubt, to have introduced evidence of the familiarity of the physicians with the process of X-ray photography and the methods employed in preparing these particular exhibits, the court cannot see that the omission so to do amounted to error necessitating the reversal of the cause. The witnesses were qualified surgeons. It is well known that the X-ray is almost universally understood and used by surgeons of the present day in examining injuries. Doubtless the court required less preliminary proof from such witnesses than would have been exacted from laymen. The surgeons had testified without objection that they had examined the injuries themselves by the use of the X-ray apparatus, and this tes-

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timony in itself was an indication that they were familiar with the use of the Roentgen rays. When, therefore, they testified to the taking of certain X-ray pictures, or rather the making of plates, the court doubtless assumed that the ordinary methods of those familiar with such matters had been followed. While counsel for the defendant objected to the testimony of the surgeons on the ground of the failure of the plaintiff to show their expert qualifications, no request was made of the court that they should be preliminarily questioned on that subject. The surgeons put initials on the plates at the time they were made, and testified that those initials appeared on the prints introduced in evidence. But, even if an error were committed in the admission of testimony relating to the photographs, it was harmless, for it was evident that the condition shown by the photographs did not differ from the circumstances disclosed by the testimony of the physicians based on their own observations. A photograph is used like any other chart, for illustrative purposes; and where, as in this case, such illustrations do not mislead, no error is wrought.

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### THE ELECTRIC ENEMA.

A new technic for intestinal obstruction and postoperative bowel paralysis is offered by W. H. Dieffenbach, in the *Journal A. M. A.* It consists essentially in the employment of seminormal saline enemas through a hollow electric electrode connected with the galvanic current, followed later if necessary by faradization with similar enemas. He describes the technic in detail using a twenty-four dry cell apparatus with the usual attachments for galvanic and faradic currents with a galvanic current of fifteen M. A. After three minutes of electrolysis, with the negative pole in the rectum and the positive over the ascending colon, the pole is reversed about every thirty seconds for five or ten minutes which usually produces peristalsis and desire for evacuation. If this is not sufficient following the interrupted galvanic treatment the rheophores is made to the high tension faradic coil and the current manipulated through the secondary coil so as to produce gradually increasing and diminishing contraction effects. After the electric treatment and removal of the bed pan, the patient is placed in an inclined position of twenty-five to forty-five degrees to favor normal peristalsis. He considers this important and has kept it up for three days in several cases. Following the treatment, normal saline retention enemas, one quart at a temperature of from 105 to 110 F., are given every two hours until normal conditions intervene. The earlier this treatment is given the better. The conditions in which he finds it useful are as follows: (1) chronic constipation with impaction of feces; (2) atony of the bowel; (3) traumatic, localized and general peritonitis with intestinal stasis; (4) intestinal torpor after shock; (5) slight volvulus or kinks in the bowel after prolonged manipulation, and chilling of the bowel following laparotomies; (6) intestinal paralysis after prolonged meteorism; (7) intestinal paralysis following various forms of hernia. The conditions in which the treatment is of doubtful or negative value are the following: (1) intussusception; (2) stricture of the bowel; (3) adhesive bands about the intestines; (4) malignant growths involving the bowel; (5) tumors impinging on the lumen of the intestines. In these cases surgery must be invoked, and the electric treatment can be subsequently employed for its stimulation of peristalsis.

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### GALVANISM FOR RESIDUAL PARALYSIS.

Tom A. Williams, in *Clinical Medicine,* reminds us that muscles supplied by a cut nerve will atrophy and will not

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regenerate although they may be massaged till the end of life.

If, on the other hand, these severed nerves are galvanized from the beginning, atrophy will not occur, for the exercise of their contractile functions maintains the integrity of the muscle-elements; and it is only galvanism which can excite contractility when the motor nerve and its endings have degenerated. If treated by galvanism from the beginning, a living muscle-cell will greet each regenerated nerve-fiber which pushes to its destination. If galvanism is not used, the envelopes of only dead muscle-spindles will be encountered. The time for these to regrow, must, then, be added to the duration of every case not treated by galvanism.

It is necessary to restate these simple physiological facts on account of the vogue of the pernicious statement that no treatment of poliomyelitis should begin until four months have elapsed. This doctrine is another instance of unthinking orthodoxy. But if the elementary physiological considerations just presented make no appeal, one need only cite the high authority of Erb, Bergonic, Zimmern, and Zappert, the latter the distinguished Viennese pediatrician (added to that of Duchenne's final experience) who makes a practice of galvanizing the paralyzed; and the negative pole should active symptoms subside.

The galvanic current should be applied only to those muscles which are paralyzed muscles just as soon as the be placed over the muscle itself near its tendon of insertion, while the positive pole should be attached to a large electrode, applied over the abdomen or other indifferent point. It is useless to stimulate the motor-point except during the first two weeks, that is, before any nerve-endings have ceased to be stimulatable on account of degeneration.

Of course, contractures and other deformities should not be permitted; and even when paralysis is complete and irremediable they can be mainly prevented by the maintenance of proper posture. Orthopedic expedients are too often the resort of despair and the result of neglect in providing proper and early treatment, but when necessary the weak or atrophying muscles may be reinforced with advantage by elastic suspenders.

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## INJURY BY ELECTRICITY.

SIR THOMAS OLIVER, writing on this topic in the *Lancet,* warns that electricity cannot be trifled with. Experience and experiment alike point the way by which some of the dangers incidental to its use may be averted. The danger depends upon the amount of current passing through the body, the kind of contact, and the insulated position of the individual at the particular time. If he is wearing damp boots, standing on wet soil, and the skin is moist, all of these will aggravate the effects of an electrical shock. The danger is not one of high potentiality of current alone, but of it *plus* the conditions under which the current is received.

Voltage in electrical parlance means pressure or electro-motive force. It is difficult to say what voltage is fatal to man. In the United States where the current has been used for the electrocution of criminals not less than 1450 volts has been insisted upon, but in some instances death was not instantaneous. As regards illumination of factories, there is one case on record where a lad on taking hold of a lamp which had been burning badly was killed by a 200 volts alternating current. On the other hand, contact with currents carrying 2000 volts pressure has been made and no serious injury followed. Although opinions are divided as to the comparative dangers of "continuous" and "alternating" currents, it is generally believed that of the two the "alternating" current is the more dangerous. Between 1902 and 1908 there were three fatalities due to continuous currents of 250 volts and lower,

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whereas during the same period 30 deaths were the consequence of alternating currents. The Board of Trade considers alternating currents to be twice as dangerous as continuous. There is no proof that any one man is more susceptible to electric shock than another. It is, as already stated, rather a question of good or bad contact, dampness of skin, and amount of current entering the body. A dry skin offers greater resistance to the entrance of electrical currents than the same when moist. Where the contact is good and conditions are favorable there may be great destruction of tissue locally or there may be sudden interruption of nerve connections which cause immediate death. With milder exposures what happens is that the muscles are thrown into a state of tetanic rigidity so that the individual cannot relax grip of any charged object he has taken hold of, and until the circuit is broken it is dangerous for any other person with unprotected hands to try to rescue him. Effects are only produced when electrical currents enter and leave the body. Any pain experienced may be the result of over-stimulation of sensory nerve endings in the skin, strong cramp-like contraction of muscles, or of the local action at the point of contact of the accumulated products arising from electrolytic decomposition. If the injured person does not lose consciousness fear may cause him to faint, and on the re-establishment of the circulation memory of the harrowing event is apt to retard recovery. The individual either remains nervous for a long time afterwards or he complains of frequent headache and ill-defined pains throughout his body, which are aggravated by disturbed electrical conditions of the atmosphere. Within the last two years the author has seen two cases in which severe burning was caused by high pressure currents. One of the patients succumbed to his injuries within seven hours after the accident.

*Treatment of the injured.*—For slight shock followed by recovery no treatment is required. For burns the application of boric acid compresses, or charcoal poultices if there is much destruction of tissue, is called for. Where an injured workman is in contact with, or cannot lose grip of, live metal the greatest care must be exercised in touching his body, for any attempt to separate the two might be followed by a disastrous shock to the person rendering assistance. Under any circumstances the breaking of the current means a fresh shock to the individual concerned. The rescuer should have his hands in india-rubber gloves or wrapped round with thick, dry rags. If it is a live wire with which contact has been made this should be cut if possible with long iron scissors in wooden handles. Once the circuit is broken, should there be no signs of life, the body must be placed upon its back and artificial respiration immediately resorted to and continued for a considerable time. Even if there is no quick response, artificial respiration should be continued. In our experiments we succeeded in resuscitating animals whose heart and respiration had ceased for several minutes, and at the Home Office Arbitration Inquiry concerning regulations for electric power stations one of the witnesses stated that at his works in one man who had received 2000 volts shock the doctor pronounced life to be extinct, but his fellow workmen, to their credit, be it said, immediately resorted to artificial respiration, and as the result of having kept this up for over an hour the man is at work to-day.

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## PYORRHOEA ALVEOLARIS.

TOUSEY states that the X-ray and high frequency currents from ultraviolet ray vacuum bulbs are very successful in treating pyorrhœa alveolaris. The applications are mild and the only effect the patient says he notices is that the pain has disappeared. It is not to be employed as a substitute

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for the mechanical and chemical measures of the dentist, but this treatment enables us to cure these cases after regular dental treatment has failed. It is the author's practice to make radiographs of the affected regions. These show the extent of pocketing from absorption of the alveolar process and serve for comparison when the case is cured. They are of the greatest assistance in some cases by revealing the cause of the trouble in an unerupted supernumerary tooth or in a retained fragment of a root or in an instrument or filling protruding from the root canal.

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## SOLID CARBON DIOXIDE.

MORTON has an interesting paper in the *Lancet* on the use of carbon dioxide in the treatment of unsightly marks and growths and tabulates his results as follows:

Capillary nevi. Of these 212 cases were completely cured by a single application, lasting as a rule, 40 seconds; 8 had two, 2 had three, and 2 had four applications; 1 case, which was completely cured after three applications, was finished off by electrolysis.

*Cavernous Nevi.*—As might be expected, the results attained in this class are not so brilliant, but even here 33 cases were completely cured by a single application; 8 had two, 3 had three, and 2 had four applications; 5 cases were incompletely cured or not benefited.

In those cases in which the capillary and cavernous varieties were mixed carbon dioxide was used for the most part, but most of them there was a deeply seated cavernous part that was more suited to electrolysis.

*Port-wine Marks.*—This still remains the most difficult variety of nevus to deal with, and the writer states that while he cannot claim to have had results vastly better than can be obtained by other methods, such as radium, the results that can be had by the use of solid carbon dioxide are, in his opinion, as good as any other, and the method is free from most of the objections that can be laid to the usual modes of treatment. Every portion of the mark has to be treated at least twice, and mostly three times. A single application appears to have little or no result so far as taking out the color is concerned.

*Lupus Vulgaris.*—Quite recently the author has had seven cases of this disease to treat, and so far as the immediate results are concerned there is every reason to think that in carbon dioxide we have a means of dealing with this scourge in no uncertain way. In treating these he removes crusts as far as possible and makes very firm pressure for at least forty seconds; a very intense reaction follows, with necrosis of the diseased area. The part must be treated with full antiseptic precautions, and even then the healing process will take from two to three weeks. In all the cases he has referred to complete healing has taken place, and so far as one can tell at this stage the result is a complete success. It is, of course, too soon to say if the cures will be permanent.

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## TABLETS THAT DO NOT DISSOLVE.

It is bad to give inert drugs as medicines. Inert drugs are those which have lost their active properties either through age or failure in preparation.

Such drugs are the same as no medicines at all and they delude both the physician and the patient with false hopes.

Tablets which contain active drugs are just as bad if the tablets do not dissolve, and there are many tablets and pills which do not readily dissolve in the stomach and alimentary canal.

It is a good plan to crush them before taking as a general rule.

Even quinine pills are often covered with a heavy coat of gelatine which is hardened with age and which is almost impossible for the stomach acids to remove.

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# THERAPEUTIC BRIEFS.

**Neuralgia.—**

Ol. Gaultherae .....
Guaiacolis .....aa M xv
Mentholi .....grn. x
Adipis Lanae .....
Cerati .....aa 3ij

A small quantity to be rubbed in over seat of pain, night and morning.

**Parotitis.—**

Tinct. Belladonnae .....
Tinct. Aconiti .....
Tinct. Opii .....aa 3iv

M. Sig.: Apply several times daily over the swelling.—*Mercks Archives.*

**Acute Nephritis.—**

Unless dropsy is present, the patient may be given to drink freely of a beverage consisting of a dram or two of potassium bitartrate added to a pint of boiling water, flavored with lemon juice and a bit of lemon peel. The mixture should be allowed to cool before drinking.

**Endometritis.—**

In hemorrhagic endometritis in girls and young women, Ralph Perry, in the *Office Practitioner,* advises the following:

Ergotin .....gr. ij
Pulv. Supraren. Dessic.....gr. v
Gelatin Bougie Mass q. s.

Make one uterine bougie. One such bougie to be inserted daily.

**Sciatica.—**

Methyl Salicylatis .....3ss
Olei Cajuputi .....f. 3ss
Olei Eucalypti .....M xv
Linim. Saponis .....f. 3ss
Spt. Rectif.....q. s. ad. 3viij

M. Sig.: Apply with friction topically.

**Insomnia of Gout.—**

Potassii Bromidi .....gr. xx
Tr. Hyoscyami .....f. 3ss
Tr. Lupuli .....f. 3j
Aq. Camphorae .....f. 3j

M. et ft. haustus.

Sig.: Take at bed time.

**Flatulence.—**

Magnesii Carbonatis .....3i
Pulv. Rhei .....3ss
Ol. Menth. Pip.....M xx

M. Ft. pil. No. xx.

Sig.: Two pills to be taken after each meal.—*Le Progres Medical.*

**Adhesive Pleurisy.—**

An excellent liniment for this may be made by triturating hydrated chloral, camphor, and menthol in equal parts, and applying to the chest surface. Inunctions of iodine-vasogen ointment will assist the absorption of the adhesions.

**Itching.—**

Ralph Bernstein recommends a lotion composed of pulv. calamine, pulv. zinc oxide, and glycerine, of each a dram, to four ounces of lime water. It should be well shaken before applying, and be applied by pouring a little of the lotion into a saucer, moistening a piece of linen with it, and simply dabbing the itching surface. Cotton cloth absorbs too much of the lotion.

**Purgative.—**

The following purgative is recommended by Huchard:

Aloes Socotrinae .....3iiss
Extracti Cinchonae .....3j
Pulv. Cannellae .....3ss

M. Fiant pilulae c.

Sig.: One or two before meals.

**Asthma.—**

Williams recommends the following mixture for local use in this complaint

Cocaine hydrochlor.....gr. ij.
Atropin sulf.....gr. ij.
Sodii nit.....gr. x.
Glycerin .....gt. xx.
Aquae q. s.....oz. ss.

to be inhaled by a fine spray, five to ten minims at a dose.

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# THE DOCTOR'S EASY CHAIR

## ON BEING FOUND OUT.

WM. M. THACKERAY.

AT THE close (let us say) of Queen Anne's reign, when I was a boy at a private and preparatory school for young gentlemen, I remember the wiseacre of a master ordering us all, one night, to march into a little garden at the back of the house, and thence to proceed one by one into a tool or hen-house, (I was but a tender little thing just put into short clothes, and can't exactly say whether the house was for tools or hens,) and in that house to put our hands into a sack which stood on a bench, a candle burning beside it. I put my hand into the sack. My hand came out quite black. I went and joined the other boys in the school-room; and all their hands were black too.

By reason of my tender age (and there are some critics who, I hope, will be satisfied by my acknowledging that I am a hundred and fifty-six next birthday) I could not understand what was the meaning of this night excursion—this candle, this tool-house, this bag of soot. I think we little boys were taken out of our sleep to be brought to the ordeal. We came, then, and showed our little hands to the master; washed them or not—most probably, I should say, not—and so went bewildered back to bed.

Something had been stolen in the school that day; and Mr. Wiseacre having read in a book of an ingenious method of finding out a thief by making him put his hand into a sack (which, if guilty, the rogue would shirk from doing), all we boys were subjected to the trial. Goodness knows what the lost object was, or who stole it. We all had black hands to show to the master. And the thief, whoever he was, was not Found Out that time.

I wonder if the rascal is alive—an elderly scoundrel he must be by this time; and a hoary old hypocrite, to whom an old schoolfellow presents his kindest regards—parenthetically remarking what a dreadful place that private school was; cold, chilblains, bad dinners, not enough victuals, and caning awful!—Are you alive still, I say, you nameless villain, who escaped discovery on that day of crime? I hope you have escaped often since, old sinner. Ah, what a lucky thing it is, for you and me, my man, that we are *not* found out in all our peccadilloes; and that our backs can slip away from the master and the cane!

Just consider what life would be, if every rogue was found out, and flogged *coram populo!* What a butchery, what an indecency, what an endless swishing of the rod! Don't cry out about my misanthropy. My good friend Mealymouth, I will trouble you to tell me, do you go to church? When there, do you say, or do you not, that you are a miserable sinner? and saying so, do you believe or disbelieve it? If you are a M. S., don't you deserve correction, and aren't you grateful if you are to be let off? I say again, what a blessed thing it is that we are not all found out!

Just picture to yourself everybody who does wrong being found out, and punished accordingly. Fancy all the boys in all the school being whipped; and then the assistants, and then the head master (Doctor Bradford let us call him). Fancy the provost-marshal being tied up, having previously superintended the correction of the whole army. After the young gentlemen have had their turn for the faulty exercises, fancy Doctor Lincolnsinn being taken up for certain faults in *his* Essay and

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Review. After the clergyman has cried his peccavi, suppose we hoist up a bishop, and give him a couple of dozen! (I see my Lord Bishop of Double-Gloucester sitting in a very uneasy posture on his right reverend bench.) After we have cast off the bishop, what are we to say to the Minister who appointed him? My Lord Cinqwarden, it is painful to have to use personal correction to a boy of your age; but really * * * *Siste tandem, carnifex!* The butchery is too horrible. The hand drops powerless, appalled at the quantity of birch which it must cut and brandish. I am glad we are not all found out, I say again; and protest, my dear brethren, against our having our deserts.

To fancy all men found out and punished is bad enough; but imagine all women found out in the distinguished social circle in which you and I have the honor to move. Is it not a mercy that so many of these fair criminals remain unpunished and undiscovered? There is Mrs. Longbow, who is forever practicing, and who shoots poisoned arrows, too; when you meet her you don't call her liar, and charge her with the wickedness she has done, and is doing. There is Mrs. Painter, who passes for a most respectable woman, and a model in society. There is no use in saying what you really know regarding her and her goings on. There is Diana Hunter—what a little haughty prude it is; and yet *we* know stories about her which are not altogether edifying. I say it is best, for the sake of the good, that the bad should not all be found out. You don't want your children to know the history of that lady in the next box, who is so handsome, and whom they admire so. Ah me, what would life be if we were all found out, and punished for all our faults? Jack Ketch would be in permanence; and then who would hang Jack Ketch?

They talk of murderers being pretty certainly found out. Psha! I have heard an authority awfully competent vow and declare that scores and hundreds of murders are committed, and nobody is the wiser. That terrible man mentioned one or two ways of committing murder, which he maintained were quite common, and were scarcely ever found out. A man, for instance, comes home to his wife, and * * * but I pause—I know that this Magazine has a very large circulation. Hundreds and hundreds of thousands—why not say a million of people at once?—well, say a million, read it. And amongst these countless readers, I might be teaching some monster how to make away with his wife without being found out, some fiend of a woman how to destroy her dear husband. I will *not* then tell this easy and simple way of murder, as communicated to me by a most respectable party in the confidence of private intercourse. Suppose some gentle reader were to try this most simple and easy receipt—it seems to me almost infallible—and come to grief in consequence, and be found out and hanged? Should I ever pardon myself for having been the means of doing injury to a single one of our esteemed subscribers? The prescription whereof I speak—that is to say, whereof I *don't* speak—shall be buried in this bosom. No, I am a humane man. I am not one of your Bluebeards to go and say to my wife, "My dear! I am going away for a few days to Brighton. Here are all the keys of the house. You may open every door and closet, except the one at the end of the oak-room opposite the fire-place, with the little bronze Shakspeare on the mantelpiece (or what not)." I don't say this to a woman—unless, to be sure, I want to get rid of her—because, after such a caution, I know she'll peep into the closet. I say nothing about the closet at all. I keep the key in my pocket, and a being whom I love, but who, as I know, has many weaknesses, out of harm's way. You toss up your head, dear angel, drub on the ground with your lovely little feet, on the table with your sweet rosy fingers, and cry, "Oh, sneerer!

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You don't know the depth of woman's feeling, the lofty scorn of all deceit, the entire absence of mean curiosity in the sex, or never, never would you libel us so!" Ah, Delia! dear, dear Delia! It is because I fancy I *do* know something about you (not all, mind—no, no; no man knows that)—Ah, my bride, my ringdove, my rose, my poppet—choose, in fact, whatever name you like—bulbul of my grove, fountain of my desert, sunshine of my darkling life, and joy of my dungeoned existence, it is because I *do* know a little about you that I conclude to say nothing of that private closet, and keep my key in my pocket. You take away that closet-key then, and the house-key. You lock Delia in. You keep her out of harm's way and gadding, and so she never *can* be found out.

And yet by little strange accidents and coincidences how we are being found out every day. You remember that old story of the Abbé Kakatoes, who told the company at supper one night how the first confession he ever received was—from a murderer let us say. Presently enters to supper the Marquis d Croquemitaine. "Palsambleu, abbé!" says the brilliant marquis, taking a pinch of snuff, "are you here? Gentlemen and ladies! I was the abbé's first penitent, and I made him a confession which I promise you astonished him."

To be sure how queerly things are found out! Here is an instance. Only the other day I was writing in these Roundabout Papers about a certain man, whom I facetiously called Baggs, and who had abused me to my friends, who of course told me. Shortly after that paper was published another friend—Sacks let us call him—scowls fiercely at me as I am sitting in perfect good-humor at the club, and passes on without speaking. A cut. A quarrel. Sacks thinks it is about him that I was writing; whereas, upon my honor and conscience, I never had him once in my mind, and was pointing my moral from quite another man. But don't you see, by this wrath of the guilty-conscienced Sacks, that he had been abusing me too? He has owned himself guilty, never having been accused. He has winced when nobody thought of hitting him. I did but put the cap out, and madly butting and chafing, behold my friend rushes to put his head into it! Never mind, Sacks, you are found out; but I bear you no malice, my man.

And yet to be found out, I know from my own experience, must be painful and odious, and cruelly mortifying to the inward vanity. Suppose I am a poltroon, let us say. With fierce moustache, loud talk, plentiful oaths, and an immense stick, I keep up nevertheless a character for courage. I swear fearfully at cabmen and women; brandish my bludgeon, and perhaps knock down a little man or two with it; brag of the images which I break at the shooting-gallery, and pass amongst my friends for a whiskery fire-eater, afraid of neither man nor dragon. Ah me! Suppose some brisk little chap steps up and gives me a caning in St. James's Street, with all the heads of my friends looking out of all the club windows. My reputation is gone. I frighten no man more. My nose is pulled by whippersnappers, who jump up on a chair to reach it. I am found out. And in the days of my triumphs, when people were yet afraid of me, and were taken in by my swagger, I always knew that I was a lily-liver, and expected that I should be found out some day.

That certainty of being found out must haunt and depress many a bold braggadocio spirit. Let us say it is a clergyman, who can pump copious floods of tears out of his own eyes and those of his audience. He thinks to himself, "I am but a poor swindling, chattering rogue. My bills are unpaid. I have jilted several women whom I have promised to marry. I don't know whether I believe what I preach, and I know I have stolen the very sermon over which I have been snivelling. Have they found me out?" says he, as his head drops down on the cushion.

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Then your writer, poet, historian, novelist, or what not? The "Beacon" says that "Jones's work is one of the first order." The "Lamp" declares that "Jones's tragedy surpasses every work since the days of Him of Avon." The "Comet" asserts that "J.'s 'Life of Goody Two-shoes' is a genuine lyric, a noble and enduring monument to the fame of that admirable Englishwoman," and so forth. But then Jones knows that he has lent the critic of the "Beacon" five pounds; that his publisher has a half-share in the "Lamp;" and that the "Comet" comes repeatedly to dine with him. It is all very well. Jones is immortal until he is found out; and then down comes the extinguisher, and the immortal is dead and buried. The idea *(dies irae!)* of discovery must haunt many a man, and make him uneasy, as the trumpets are puffing in his triumph. Brown, who has a higher place than he deserves, cowers before Smith, who has found him out. What is a chorus of critics shouting "Bravo?"—a public clapping hands and flinging garlands? Brown knows that Smith has found him out. Puff, trumpets! Wave, banners! Huzza, boys, for the immortal Brown! "This is all very well," B. thinks (bowing the while, smiling, laying his hand to his heart); "but there stands Smith at the window; *he* has measured me; and some day the others will find me out too." It is a very curious sensation to sit by a man who has found you out, and who you know has found you out; or, *vice versâ,* to sit with a man whom *you* have found out. His talent? Bah! His virtue? We know a little story or two about his virtue, and he knows we know it. We are thinking over friend Robinson's antecedents, as we grin, bow and talk; and we are both humbugs together. Robinson a good fellow, is he? You know how he behaved to Hicks? A good-natured man, is he? Pray do you remember that little story of Mrs. Robinson's black eye? How men have to work, to talk, to smile, to go to bed, and try and sleep, with this dread of being found out on their consciences! Bardolph, who has robbed a church, and Nym, who has taken a purse, go to their usual haunts, and smoke their pipes with their companions. Mr. Detective Bullseye appears, and says, "Oh, Bardolph! I want you about that there pyx business!" Mr. Bardolph knocks the ashes out of his pipe, puts out his hands to the little steel cuffs, and walks away quite meekly. He is found out. He must go. "Good-bye, Doll Tearsheet! Good-bye, Mrs. Quickly, ma'am!" The other gentlemen and ladies *de la société* look on and exchange mute adieux with the departing friends. And an assured time will come when the other gentlemen and ladies will be found out too.

What a wonderful and beautiful provision of nature it has been that, for the most part, our womankind are not endowed with the faculty of finding us out! *They* don't doubt, and probe, and weigh, and take your measure. Lay down this paper, my benevolent friend and reader, go into your drawing-room now, and utter a joke ever so old, and I wager sixpence the ladies there will all begin to laugh. Go to Brown's house, and tell Mrs. Brown and the young ladies what you think of him, and see what a welcome you will get! In like manner, let him come to your house, and tell *your* good lady his candid opinion of you, and fancy how she will receive him! Would you have your wife and children know you exactly for what you are, and esteem you precisely at your worth? If so, my friend, you will live in a dreary house, and you will have but a chilly fireside. Do you suppose the people round it don't see your homely face as under a glamour, and, as it were, with a halo of love round it? You don't fancy you *are,* as you seem to them? No such thing, my man. Put away that monstrous conceit, and be thankful that *they* have not found you out.

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# BOOK REVIEWS.

TEXT-BOOK OF SURGICAL ANATOMY. Second Edition Revised. A Text-Book of Surgical Anatomy. By William Francis Campbell, M. D., Professor of Anatomy at the Long Island College Hospital. Second edition revised. Octavo of 675 pages, with 319 original illustrations. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $5.00 net; Half Morocco, $6.50 net.

In the end, of course, so far as the physician and surgeon are concerned, there is no anatomy but surgical anatomy, if one understands the term in its broadest sense. There is even a movement on foot among the English medical educators to restrict the study of anatomy in the medical colleges to those larger and more practical phases of the subject which pertain to what may be called gross anatomy. Without going into the pros and cons of such a movement, it may be unhesitatingly asserted that the aspects of anatomy which most concern the practitioner of medicine are those which have to do with surgery and surgical considerations. Especially is this true of those practitioners who expect to do any surgery—and that includes almost all present-day practitioners. Therefore, Dr. Campbell's textbook should have an intense interest and a profound usefulness for the physician. The book itself is excellent in every respect, and the second edition is just as much better than the first edition as we should expect to find it, in view of all that has entered into the period between the two.

DIAGNOSTIC METHODS. Second Edition Revised. A Treatise on Diagnostic Methods of Examination. By Prof. Dr. Hermann Sahli, Director of the Medical Clinic, University of Bern. Edited, with additions, by Nathaniel Bowditch Potter, M. D., Asst. Professor of Clinical Medicine, College of Physicians and Surgeons, New York. Octavo of 1229 pages, containing 472 illustrations. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $6.50 net; Half Morocco, $8.00 net.

Even so short a period as six years, when it forms a part of the twentieth century, represents a considerable march forward in the matter of diagnostic resource. The past six years has seen the inauguration and adoption of several exceedingly important modes of diagnosis, which must find representation in an adequate text book upon the subject. The new edition of Sahli's work, edited by Dr. Potter, embodies all the progress made since the appearance of the first edition in 1905, without yielding anything of its permanent and judicial character. We have always regarded Sahli's work as bearing the same relation to diagnosis that Gray bears to anatomy—a sort of winnowing out of the vast mass of research and achievement, and bestowal of permanence upon such as seems destined to endure. Not quite the same, perhaps, because diagnosis is essentially a fluid subject and does not lend itself to such fixed permanence as anatomy. But in principle the same. It represents the last word on diagnosis and diagnostic methods. What is not to be found in the latest edition of Sahli is hardly worth hunting for elsewhere. And, to our thinking, one of its most praiseworthy features has always been its intelligent interpretation of the diagnostic findings of which it treats. Like the works of all great men, it serves alike the specialist and the general practitioner.

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THE GENERAL PRACTIONER AS A SPECIALIST A Treatise Devoted to the Consideration of Medical Specialties, and a Guide to the Development of Office Practice. By Jacob Dissinger Albright, M. D. Fourth Edition, Revised, Enlarged, and Illustrated. Published by the Author, 3228 North Broad Street, Philadelphia, Pa. Price $3.00, prepaid.

This journal has persistently urged upon the general practitioner, to whose interests it is primarily devoted, the importance and the advantage of doing as much of his special work as he possibly can, instead of allowing himself to degenerate into a mere feeder for the specialist. Not that the specialist has no place—that were, of course, absurd. But his proper sphere is as a special adviser and aid to the general practitioner, not as his entire supplanter and dictator. The general practitioner is himself largely to blame for this state of affairs, and the remedy for it is in his hands. A proper reassertion of himself and a determination to square himself with the spirit of the time and "deliver the good" will go far toward getting a fresh hold upon public esteem and confidence.

The young physician entering on his career is given his choice; he may be a successful medical man in all that the term implies, if he will promise to think and act and feel in medicine. He cannot go beyond the narrow limits of his profession; to do so invites disaster to his ambition to excel in medicine.

This explanation will account for the fact that a business career and the profession of medicine cannot be followed successfully by one and the same person. They are as incompatible as an acid and an alkali.

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## SKIN ERUPTIONS FROM TAKING MEDICINE.

The *Healthy Home* tells of a certain woman who was something of an invalid, had spent a number of sleepless nights. In despair she urged her physician to give her something to make her sleep, which he did. The following day, after a night of rest, she really felt somewhat better but was troubled by an itching which seemed to cover a good share of her body. When the doctor came she called his attention to the trouble.

"Nothing very serious about that," said the doctor, "I had to give you a little opium and the drug sometimes causes the symptom you complain of."

A number of drugs in common use produce a characteristic eruption, and these should always have careful scrutiny by the physician lest they be mistaken as an original disease.

Here is a list of commonly used drugs which at times produce eruptions, itching, eczema and other manifestations:

Bromide of potassium; papules, pustules, ulcers, echymoses and pemphigus.
Chloral: erythema; itching, desqumation, eczema and petechia.
Copaiba and cubebs: pemphigus, erythema and eczema.
Aconite: vesicular exanthemata.
Arsenic: erythema, papules, vesicles and sometimes pustules.
Iodide of potassium: about the same as arsenic, but more marked.
Mercury: erythema and eczema.
Morphine: erythema, papular eruption and sometimes desquamation.
Phosphorous: purpura.
Quinine: erythema, eczema, hemorrhagic purpura, pemphigus and sometimes a typical urticaria with dyspnea.
Rhus toxicodendron: vesicles, pruritus, redness and swelling of the skin.
Salicylic acid: purpura, pemphigus and vesicular angina.
Santonin: vesicles and pemphigus.
Belladonna, strychnine and stramonium may produce about the same dermal manifestations as quinine; while turpentine produces an eruption like that of copaiba.

### Even Foods Produce Eruptions

A number of foods may produce an eruption, especially in those individuals who have an idiosyncrasy for certain articles of diet. Acid fruits may cause an acute eczema. Strawberries frequently produce urticaria. Close observers have said that apples sometimes produce an acneform efflorescence about the mouth. Walnuts cause an inflammation of the mucous membrane of the mouth. Shellfish and salt meats often cause a hive-like eruption.

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### A VERY POPULAR OPERATING CHAIR.

It is one thing to be a good cabinet maker and quite another to be in close touch with the technical needs of operative procedure. The cabinet maker who does not make a study of technique is very apt to consider simplicity of secondary importance. It is certainly of vital importance where a moment sometimes counts for life or death.

The major surgical operations requiring a recumbent posture and administration of an anaesthetic is often as conveniently performed on a plain table as anywhere else, but the minor operation, or treatments, involving the Eye, Ear, Nose, Throat, etc., call for simplicity as to accessories, and the elimination of complicated and unnecessary machinery.

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### FAITH.

The physician tiptoed into the sick room.

"Is the patient taking a tablespoonful of brandy every two hours, as I ordered?" he asked.

"Oh, yes, sir," answered the nurse. "He's very faithful about that. In fact, he is twenty-two doses ahead already—and you only prescribed it this morning."

An old gentleman walked up to a pretty girl attendant at the counting room of a daily newspaper office a few days ago, and said:

"Miss, I would like to get copies of your paper for a week back."

"You had better try porous plasters," she abstractedly replied; "you can get them just across the street."

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"I love you!" he cried, passionately.

"Do you love me alone?" she asked, after the manner of cautious maidens.

"Gee! That's when I love you most," he replied, somewhat ambiguously.

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"This is awkward. I flirted with a young man at the seashore, and we both pretended to be rich. Now I find he lives in our city."

"But you needn't see him if you don't want to."

"I can't well get out of it. It seems he collects the payments on our piano."

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"What do you do for a living, Mose?"

"I'se de manager ob a laundry."

"What's the name of this laundry?"

"Eliza Ann."

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"Do yez remimber thim moth balls yez told me to git to kill moths wid?"

"Oi do."

"They're no good. Oi broke tin dollars worth uv chiney ware and windows throwin' thim little balls at th' moths in our house and Oi niver hit one uv thim."

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PAUL AUERBACH: "Aus der Hautabteilung der Magdeburger Krankenanstalt" (Oberarzt Dr. Schreiber). "Klin. Therap. Wochenschrift," 1909, No. 24.
Dr. H. REINHARDT: "Apotheker-Zeitung," 1909, page 90. See also "Vierteljahrschrift fur pract. Pharmacie," 1908, Part 4, page 311.
Dr. KURT PEIN (Rudolph Virchow Hospital, Berlin): "Die Therapie der Gegenwart," Part 3, March, 1910.

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# The Medical Brief

A MONTHLY JOURNAL OF PRACTICAL MEDICINE.

Vol. XXXIX St. Louis, Mo., August, 1911. No. 8.

## EDITORIALS.

### THE A. M. A. IN ACTION AT LOS ANGELES.

WHETHER there was something in the western air of the Pacific Coast, or whatever the reason may be, there seems to have been an awakening on the part of the administration of the Association in its recent session at Los Angeles; and, for a wonder, the House of Delegates actually "did things." To be sure, as we shall presently take occasion to point out, the things that they did were not exactly what they seemed. There was a specious ring about their transactions which robs them of any thing like merit. But nevertheless, they seem to have been aroused into action, and that is something.

To begin with, the election of officers was marked by the nominal end of the reign of Dr. Simmons, whose mortgage on the Secretariat has been a proverbial affair for the past ten years, so that it looked as though he had a life tenure on the job which nobody and nothing could shake. It is true that, as far as appearances go, nothing and nobody *did* shake him out of his position, for on the surface it appears that he voluntarily resigned on conventional grounds. But, for the present, the important thing is that he is out. A further change in the cabinet took place in the dislodgment of Dr. Billings from the office of treasurer, on which that gentleman apparently had the same strangle hold that Dr. Simmons had on the secretariat. In this case again, the ostensible grounds of resignation were also conventional. But again, the important consideration is that Dr. Billings is out.

A little closer reflection upon these changes will show the most casually interested observer the truth of our previous statement, that "there is more in this than meets the eye"; especially when one considers them in the light of what has gone before. In spite of the apparent conventionality and matter-of-course attending the resignation of these two officials, no one who has watched the course of events during the past five years can doubt that their action has been led up to, if not morally forced, by the steady growth and frank expression in various quarters of opposition to the way in which the offices in question have been administered. Let us not be misunderstood. We have no idea but what both Dr. Simmons and Dr. Billings could have had the offices again if they had wanted them. The House of Delegates would this year have obeyed "their master's voice," just as they have done in previous years. But it is evident that the officials themselves were shrewd enough to feel the wisdom of recognizing the insurgent sentiment and of bowing to it, or at least of seeming to bow to it. And they evidently regarded the present convention as a psychological moment for doing so.

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We say *seeming* to bow to insurgent sentiment. Still reading between the lines, the most unsophisticated will not be deceived into imagining that the regnant oligarchy has really yielded any ground. It has simply thrown a sop to Cerebus. Tendering the resignation of Dr. Simmons with one hand, with the other it has forced down the throat of the Association the nomination and election of a man who for the past few years has been Simmons' henchman and right bower, thus at one and the same coup forestalling further criticism and opposition to Simmons' continuation in office, and insuring the continuance of Simmons' policies. With the office of Treasurer it is a little different. Dr. Pusey cannot be suspected of being anybody's creature. All who know him know that he is a man of broadest interests, and the most independent character; and we wish we could believe that it was on this ground alone that he was elected to succeed Dr. Billings as treasurer. Perhaps it is straining matters a little too far to suggest that his nomination was a still shrewder and more calculated sop to the insurgent element. But in view of the past habits and practices of the Chicago clique, we cannot help feeling that Dr. Pusey's election has that kind of a taint. If it be so, we can only hope that Dr. Pusey, like Mayor Gaynor of New York, will have some surprises in store for those who put him in office.

After all, we come back to our original assertion that the significance of these changes lies in the sheer fact that they occurred, no matter if they were inspired by shrewd purposes to forestall and circumvent the rising spirit of revolt, or that they do not really represent a change at this time in the administration policies. They indicate, at all events, that the rising spirit of reform has begun to make itself felt, even within the strong entrenchments of the dominant ring. We have prophesied over and over again that reform would not come in a whirlwind, but gradually, with slow but iron feet, and we predict that this move on the part of the Administration, specious though it be, is a beginning of that slow but certain revolution.

* * *

## SUPPRESSING SENSATIONAL DETAILS.

WHEN ONE undertakes to interfere with, or even to regulate, the function of the public press in the dissemination of news, one assumes a large and dangerous task. It will be remembered that at the last convention of the American Medical Association, held in St. Louis, a resolution was offered in the House of Delegates proposing to compel the daily papers to withhold the details of all cases of murder and suicide, on the ground that the publication of such details had a strong psychological effect upon the readers in the direction of imitation, just as the reading of dime novels prompted crime among the boys who devoured them. Some one in the House was shrewd enough to recognize the absurdity of any attempt to forcibly prevent the press from carrying out its legitimate function and the resolution was changed to a *request* that the press be as sparing as possible with the details of these noted occurrences. Since that time, the matter has received considerable agitation in various quarters and has been the subject of another set of resolutions by organized medicine.

With the general spirit and purpose of this movement we are in thorough sympathy. We believe that the American press deals altogether too much in sensational and harrowing details of all kinds. Our one criticism of the resolutions offered by our medical friend is that they should limit the press restrictions to

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cases of murder and suicide. We see no reason for singling out this particular class of happenings for censorship. It is just as true that the publication of nauseating details in divorce proceedings incites to immorality and carelessness of the marriage tie. It is just as certain that flaring headlines and columns of description of train robberies and safe breaking, not to speak of defalcations of bank presidents and cashiers, gives a criminal trend in this direction to the minds of those who read them. In fact the simile might be carried straight through the category of all those undesirable subjects on which the newspapers of this country are so fond of dilating and elaborating.

We presume that organized medicine will take the stand that other forms of crime to which we have alluded do not properly come within the scope of their notice. Murder and suicide, inasmuch as they are concerned with physical violence, may perhaps be regarded as specially concerning the sociological side of medicine. We think, however, that this is rather a narrow view for organized medicine to take of its sociological interests. In these latter days every form of criminality is regarded as being more or less in the nature of a mental, and certainly of a social, disease, and should be the broad concern of medical science. Besides, it is a much more practical stand to take; for if we urge simply the suppression of undesirable details in one or two isolated subjects, we may reasonably expect the public press to disregard our plea on the ground of special pleading. But if we take the broader ground, that the publication of such details in all criminal occurrences is both undignified and inimical to public morality, then the plea derives from its very breadth a force and reasonableness which the press, in its proverbial regard for public opinion, will be neither able nor desirous of disregarding.

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## THE A. M. A. GOING INTO THE TEXT BOOK BUSINESS.

WE PRESUME that most, if not all, of our readers have either read for themselves or heard the ancient fable about a camel who insinuated its nose inside the door of the Arab's tent under the plea that it took so little room, and little by little finally managed to push its whole ungainly body into the small room, crowding out the astonished owner. At the 1910 convention of the A. M. A., held in St. Louis, the House of Delegates, by a unanimous resolution, authorized the Association, through its administrative cabinet, to go into the business of publishing extraneous medical journals, and we predicted at the time that this was simply the entering wedge by which organized medicine would eventually usurp, or attempt to usurp, the whole field of medical literature. It looks as though our prediction is in a fair way of being realized. Not content with adding to the repertoire of periodicals to be published under the auspices of the organization, the House of Delegates has this year extended the field of its publication into the domain of text-books, and has recommended that the various Sections select a man or group of men from their membership to write text-books on the several subjects represented, and that the Association publish such text-books and sell them to the members of the organization at a price which will place them in the most favorable economic competition with the text-book publications of the various medical publishing houses.

To be sure, the reason given for this step is a very plausible one. It proposes to have a paternalistic regard for those medical practitioners who cannot afford the rather high prices charged by the publishing houses for high-class text-books,

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and to insure that the subjects treated shall be handled in an authoritative and reliable manner, guaranteed in fact (for that is what it amounts to), by the authority and prestige of the Association.

Whether or not this ostensible reason is the real reason, we will not here discuss. The motive behind the act may be the best and purest, but the effect will in our opinion be anything but beneficial. Medical organization is one thing; the publication of medical text-books is quite another. If the Association intends to place these projected text-books at a price materially lower than those charged by the publishing houses, it must of course propose to forego all profit on their publication, since the publishing houses are already putting them out at prices determined by the sharpest kind of competition. That means that the writers of the text-books in question are to be picked out and hired by the Association to write or compile their works at a stated price (which cannot be very high) as a sort of contribution to charity, and it also means that all of the hundred and one processes through which a book must pass in the course of editing and publishing must be done on the same basis. We leave the reader to judge whether this method of book production is likely to bring forth the best that is available, or whether it compares favorably in this respect with the stimulation of competition that operates as between a writer and an open market. Nor is this the only objectionable feature of the plan. It is a dangerous thing for established authority, in any line of work or knowledge, to undertake the publication of authorized text-books because there will inevitably attach to such text-books, both from the point of view of the organization and from that of the reader, a specious color of authority and finality which is inimical, if not fatal, to the spirit of progress in the subject of which it deals. Just as the American Medical Association has practically established a line of medical journalism outside of which the publishers, advertisers and readers are *anathema, maranatha,* so, if it carries out this plan of text-book publication, it will inevitably set up, even without deliberately intending to do so, an orthodoxy of text-book literature to which its membership will be required to conform, and this will operate, even more powerfully than the economic conditions referred to above, to check and throttle the democratic freedom of progress upon which science depends for its very life.

We presume that nothing we say will influence the Association in its headstrong course, but we say it nevertheless. The logic of events, which is the only effective logic, will prove whether we are right or not. Our only hope lies in the strong probability that the Association will find the publication of text-books not quite such a matter for a June holiday as it seems to imagine, and that the pinch of economics in action will do for the ill-judged scheme what the logic of economics on paper is powerless to accomplish.

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# Serum Therapy in Tuberculosis.

By Edgar P. Ward, M. D.

Professor of Embryalogy and Clincal Medicine, American Medical College, St. Louis, Mo.

ONE year ago I had the pleasure of reading a paper before this society upon Intravenous Infusion in the Treatment of Tuberculosis. Further studies along this line have led me into the treatment of tuberculosis by the use of a concentrated serum in preference to the intravenous method, which is complicated and time consuming; nevertheless, I am still using the same general methods and with the same general idea in view, i. e., the production of a natural immunity. Immunity may be broadly defined as the process by which the body develops its defensive forces and wages war against substances introduced into the system which are deleterious to its welfare. It is generally divided into Natural and Acquired; Natural when the power of resisting any specific infection is the natural heritage of a race or species; Acquired, when a natural state of susceptibility is transformed by various causes into a condition of greater or less resistance.

*Acquired immunity* may be either (a) active or (b) passive. In the active form the cells of the body are stimulated by the infectious agent to generate protective substances, and immunity is thus due to the direct participation of the organism concerned, and depends upon increased cell activity. Active acquired immunity may result from: 1. An attack of the disease after natural exposure; 2. by the incorporation into the animal body of subtlethal doses of living, fully virulent bacteria; 3. living bacteria of diminished virulence; 4. dead bacteria; 5 bacteria products secreted or excreted during the life of the microbes; 6 products arising from the disintegration of the cells after death; or, 7, by the incorporation of certain microorganisms or elements or their products, which are not associated in any way with the production of the specific infection. To the latter class belongs, for example, the use of yeast in certain infections, and perhaps the retarding effect of streptcoccus infection upon certain kinds of tumors. The increased resistance of the organism so treated is most likely due to the increased leucocytosis produced, which also causes the production of an increased amount of normal antobodies. In the passive form, the tissues of the individual takes no share in the manufacture of the protective substances, the immune bodies being formed in another animal and transferred to the individual to be protected; e. g., Diptheritic antitoxine. It does seem to me that there is an intermediate ground between these two theories that offers opportunities for research work that will be prolific of very beneficial results to our patients.

It is along this intermediate line that I am now offering for your consideration some results that are remarkable, to say the least, results which may be obtained by any man if he will be but a little persistent and careful in carrying out the instruction that will follow. The essential of the use of Nuclein (which is but a normal cell constituent of bacterial character) is that it stimulates the production, as well as supplying some itself, of normal immunizing agents in the blood; also that you are introducing into the blood a vital cellular substance that aids in upbuilding the devitalized blood that we meet with so much in Tuberculosis. Further studies along these lines has led me into the field of animal nucleins in preference to those of vegetable origin.

There is no question but that the cells

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of the blood, both red and white, as well as the endothelial cells of the body, produce continuously normal antibodies for the protection of the system from invasion of germs of various character, that produce the typical disease of which each germ has been demonstrated as the cause. I believe that Metchnikoff and Ehrlich are both partly right in their theories, as well as I believe that Carl Spengler, with his immune kopper-serum is nearer to having an anti-toxin for tuberculosis than any that has yet been produced.

May we not be wrong in many of our theories in continually seeking a positive antitoxin for every form of bacterial disease? Is it not possible and also reasonable, to draw the conclusion from our past experiences that antitoxins will be found of a positive nature only for those germs that are virulent and fulminating in character, i. e., where there is an invasion of this character of germs, the patient is struck down and all the natural resistance of the body is overcome by one blow. In these cases, we must have an antitoxin, one that will neutralize the affect of the invading foe, and thus give the body an opportunity to supply normal anti-bodies to overcome the infection.

In the tubercle bacilli we have a foe of different character from these, one which is slow and insiduous in its invasion, one that manifests itself only after slowly undermining the systemic resistance, one that may take months or years to accomplish its purpose, one that invades the most vital organs of the body, and there slowly, increasingly, continuously, and relentlessly carries on its deadly work, gradually overcoming the normal resistance, then attacking and destroying the organic tissues. To meet this character of germ infection, we must adopt different tactics. We must meet the invader with those natural anti-bodies that the system itself produces. Call these anti-bodies by whatever name you will, depending altogether upon whose theories you are following or accepting, but supply them if possible.

Nuclein, by intravenous infusion, in my hands, has accomplished much, but as stated in the beginning of this article, it has many disadvantages.

In an endeavor to simplify this idea of producing and supplying normal antibodies of animal origin, I have gravitated towards a serum, and have been using for nearly a year a serum derived from the blood of sheep or goat, in which has been previously produced a hyperleucocytosis, by forcing the animal upon yeast, which is well known to be rich in nuclein and some complex enzynes. When the animal's blood shows a decided leucocytosis, the blood is drawn off, and the serum is prepared in the usual way. Extreme care is used not to break up the blood cells, but to only take the pure serum. I have chosen to call this serum Leuco-lexin, because of the large number of leucocytes, and consequently the large amount of alexin which it contains.

Laboratory tests have amply demonstrated that this serum is bactericidal in character; in fact it may be termed a super-normal bactericidal serum. It is in no sense an anti-toxin, as no production is attempted by the use of the germs, or their products, as is customary in the formation of all antitoxin serums.

Clinical results have been most satisfactory. Unfortunately, most of the cases that I have had to treat have been cases which were far advanced in the disease, in fact, most of them beyond all hope. In the primary cases, the results have been beyond my expectation. Even in these chronic cases the relief that has been obtained, and the improvement that the patient has manifested, unquestionably warrant us in using it in all stages of the disease. I have now used Leucolexin a sufficient length of time to be able to draw some conclusions, and the recitation of one or two cases with typical

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results will be sufficient to give you some idea of the benefits obtained.

S. R., age 23, family history negative. Personal history, had pneumonia with pleurisy with effusion three years ago; been gradually declining ever since. For the past two years has been under the care of a physician who advocates giving all tubercular patients enough opiates to make them comfortable, and let them die in peace. Height 5 feet 10 inches. Weight 108 lbs., temperature 104 F., pulse 130, having one or two septic chills a day. Night sweats very profuse, patient completely exhausted thereafter. Tubercle bacilli streptococci and staphlococci present in abundance, expectoration amounted to over a pint a day. Patient been confined to bed for three weeks. The family were plainly informed that little or nothing could be expected, as the patient was very melancholy and would make no effort to help himself whatever, as his previous physician had informed him he could not live a month. I informed the family that I would use the serum experimentally only. March 13th, injected 2 c. c. of serum. Had a slight chill and sweat that night. Gave another dose on the 15th, 17th, and 19th; had a slight chill on the 16th, and no sweat since the night of the 13th. Temperature 99.4, pulse 100, feeling very much better. Upon the 21st complained of feeling very sore and lame from the last injection, so did not give him one. On the 23rd had a severe chill, temperature 102, pulse 130, had a very bad sweat. Gave an injection on the 30th. Has not had a chill since the 23rd, and only two slight sweats. Temperature has not been above 99.6, and he now walks 2½ blocks to my office for treatment every other day.

June 1st. Treatments have been continued every third or fourth day for the past two months, patient is gradually improving, appetite good, sleeps well, has had no rise of temperature, no chills, and only a few light sweats during this time. This case is practically beyond hope in spite of this improvement, in my opinion, though the young man insists that he will soon be able to go to work, judging by the way he feels. In view of the fact that he is still alive, able to get about, happy and contented, three months after the expiration of the lease of life given him, is sufficient warrant for the use of the serum.

Probably one of the most remarkable cases that has come under my observation, is that of Mrs. R., age 27, family history bad, as several members of her immediate family had died of tuberculosis. At the same time she was suffering with a severe case of appendicitis, and some pelvic troubles that really called for immediate operation, though her left lung was very much affected with tubercular process. I advised her to go to the hospital, so that she might be prepared for an operation. She declined to do this, and returned to her home, some 150 miles from St. Louis. Three weeks afterwards, they requested that I come and operate upon her at her home. Taking competent assistance, and a trained nurse, I prepared to do this. On reaching the patient's bed-side, the change that had taken place in her physical condition was so alarming that I hesitated to operate at all. After informing the family of the true condition and obtaining their consent, I opened the abdomen. Tubercular peritonitis was present to such an extent and the physical condition of the patient became so alarming (as her temperature was 104, pulse 140 when she went upon the operating table) that I limited the operation proceedings to the abdominal incision and immediately sewed up the wound, expecting the patient to die from shock within a few hours' time. However, I immediately began the injection of serum, 1 c. c. every eight hours for the first forty-eight hours. Leaving the injections and care of the patient with instructions to give her 1½ c. c. every 24 hours, I left

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the patient. This treatment has been continued up to the present time, which is now three weeks since the operation; the wound healed by first intention, the temperature after the first 48 hours has not been above normal, nor pulse above 86. Appetite is good, all the emunctory organs are working naturally. Patient has gained 12 pounds in weight, is sitting up nearly all the time, and says she has not felt so well in six years. Inasmuch as she has received no medicaments of any character except the Leuco-Lexin serum, credit must be given it for these wonderful results. Of course I fully realize that time alone will demonstrate the eventual outcome of this case, but I am perfectly confident that we have cheated the Grim Reaper out of a victim.

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### SARTON FOR DIABETICS.

Von Noorden and Lampé, in *Die Therapie der Gegenwart,* report their experience with a new preparation of soja bean which they recommend as a nutrient in diabetes. The authors were encouraged to use this product as the result of their favorable experience with oatmeal in diabetes. They compared the effect of various other vegetable foods with oatmeal, and found that the latter cereal seemed to be the most suitable in the treatment of glycosuria. One of the difficulties in these diets is to supply other vegetables besides the ordinary cereals. Most of the artificial preparations, such as roborat, etc., have the disadvantage of altering the taste of foods with which they are mixed. The authors, furthermore, did not find dried peas, lentils and beans of advantage in diabetic diet. A number of years ago the authors began to experiment with soja bean, a Japanese plant, which has a fruit that resembles both the pea and the bean, and belongs to the leguminous vegetables. The Japanese bean soup, known as "shoyu," is prepared from this bean. The bean is very rich in proteids, and during the preparation nearly all other constituents are removed. On analysis, soja bean was found to contain from 30 per cent to 35 per cent of albumen, and only about 6 per cent of carbohydrates. The only trouble was that the taste of this bean did not seem to appeal to the European palate. The unchanged bean, moreover, had an unfavorable influence upon the excretion of glucose.

A method was found, finally, of removing almost all carbohydrates, as well as the unpleasant tasting constituents from the bean. The new preparation is sold under the name of sarton. The powder is used for the preparation of purées and soups. The powder is mixed to a paste with water, some butter and some meat broth are added, and the whole boiled for ten minutes. Salt and other seasoning may be added, if desired. About 80 grams of the paste are sufficient for a plate of soup. Thus prepared, the soup is pleasant to the taste and was well tolerated by over one hundred patients with diabetes on whom this diet was tried. As a rule, the use of soja soup did not have any unfavorable influence upon the excretion of sugar. The authors consider sarton as a valuable addition to the diet of diabetics.

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**Trigeminal Neuralgia.—**

The following internal mixture will be found of great assistance:

| | |
|---|---|
| Bromipini (10%) | dr. iv. |
| Syrupi Simp. | dr. iij. |
| Sp. Menth. Pip. | oz. ss. |
| Mucil. Gum Acaciae | p.s. oz. xvj. |

Ft. Emuls. Four tablespoonfuls three times a day. ❁ ❁ ❁

**Angina Pectoris.—**

Patients liable to attack are advised to carry the following around with them, and to sip it slowly as they notice the attack coming on:

| | |
|---|---|
| Sp. Ammon. Arom. | dr. j. |
| Sodii Bicarb. | gr. x. |
| Tr. Cardam. Comp. | dr. j. |
| Sp. Chloroformi | m. xx. |
| Sp. Glyc. Nit. | m. j. |
| Aquae p. s. | oz. jss. |

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# Preparations of Iodine and Their Uses.

By J. A. Burnett, M. D., Marble City, Okla.

We have numerous preparations of iodine and they have a wide range of therapeutic uses. Any remedy as iodine which is destructive to all forms of micro-organisms from the most harmless bacteria to the most virulent as anthrax is sure to be a useful therapeutic agent, and have a wide range of usefulness in the treatment of diseases. There are various so-called soluble preparations of iodine on the market which is claimed to give systemic effect by external application.

In the February, 1905, *Medical Summary,* page 370, Dr. T. W. Williams has the following to say, which I think will be of interest to all that are interested in iodine. "There is no question as to the fact that certain probably most therapeutic agents can be administered *via cutis,* and that they enter the circulation and produce their known specific effects even more rapidly and certainly in this than in any other way, because they do not pass through the digestive tract, create little or no disturbance, except in over dosage, and can for these reasons be administered in much larger doses. The remidal effects of the iodides are due wholly to the iodine they contain, and if this agent can be introduced into the circulation in its free state, free from the irritant effects of its base, so much the better. When tincture iodine is applied to the skin very little of it enters the circulation. The alcohol evaporates leaving the iodine *on* not *in* the skin, and but little of it is absorbed. I want to introduce an entirely new method of administering iodine. Let the chemist add one ounce of resublimed iodine to twelve ounces of alcohol, dilute and sufficient potassium iodide to effect solution. Distill this over in a glass retort. The iodine will all go over with the alcohol, and be condensed in the residue, leaving any crude iodine, the specimen may contain, and the potassium salt in the flask. To the product thus obtained add sufficient commercially pure glycerin to make one pint, you now have iodine in a form readily absorbed into the circulation through the skin or mucous membrane. The glycerin holds it in solution on the skin until it is all absorbed leaving no stain, unlike the tincture. I have tried all other ways of preparing it by adding glycerin to the tincture or dissolving the iodine in glycerin, alcohol and water, but the product is not the same, and will not produce the same therapeutic effect."

Dr. Williams calls this glycerole iodine another good name would be soluble iodine.

It can be used internally and externally. It is especially prepared for external use *i. e.* used externally for systemic iodine effect. It can be used on almost any part of the body, but is generally applied over the ingual, and other glands, or over the sides, ribs and sternum.

In chronic bronchitis Dr. Williams uses one or two drachms over the chest in a streak along the sternum two or three inches wide from the junction of the clivicles to the lower end of the sternum, or over the entire side from spine to sternum, and repeats this night and morning until symptoms of iodism appears, which is usually two or three days, and then omit a day and resume same way. He stops as soon as buzzing and ringing in the ears and other nervous symptoms are complained of. Glycerole iodine is a valuable remedy in

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cases of nasal catarrh. It is applied on the inside of the nose with a cotton swab, and also externally over the nose. In cases of swelled and painful joints of rheumatism or gout it gives quick relief. When the U. S. P. tincture of iodine is applied locally, the local germacidal action and counter irritation is about all the effect that is derived from it, a very little may be absorbed.

Dr. Williams considers the local use of glycerole iodine in goitre and enlarged glands superior to the hypodermic method. There is no doubt but what the local use of iodine in a soluble form would give better results in goitre and enlarged glands as well as all other conditions, if it was first applied and then drove in with the aid of a good reliable therapeutic lamp as we would not only get the effects of the iodine, but the effects of the therapeutic lamp also, which in my opinion is one of the greatest therapeutic measures discovered in modern times. In cases of puritics ani and valva a mixture of glycerole iodine and aconiti is of much value, or a mixture of glycerole iodine and liquid guaiacol can be used with good results. In cases of tonsilitis a combination of glycerol iodine and veratrum can be applied direct on the tonsils with good effect, or a mixture of glycerole iodine and liquid guaiacol can be used same way, and externally over the region of the tonsils, the pure glycerole iodine applied. In chronic bronchitis as well as other diseases of the chest, a combination of glycerole iodine and liquid guaiacol gives for better results as a local application than the glycerole iodine alone. Guaiacol (liquid) is a good substitute for creosote, and can be used externally for systemic effect. Remember to carefully regulate the dose of guaiacol when used externally, as it is an active agent and quickly absorbed. There is another preparation of iodine that I wish to speak of called iodized calcium. In the past few years there has been a great deal said about iodized calcium, and it has been put forth as a substitute, and superior preparation of iodine to all forms and salts of iodine for internal use.

Iodized calcium is not a chemical, but simply a mixture of iodine and lime. As many houses make it, it contains practically 15 per cent iodine and 85 per cent calcium compounds. One writer says iodized lime 5 cents, not 50 cents per ounce. His formula is

Resublimed Iodine.....gr. 65
Pure white air slacked lime.....3j.

Mix thoroughly in a glass mortar with pestle and then place in glass stoppered bottles. In about three days it becomes dark brown and is then ready for use.

Dr. Geo. Roberts, of Lincoln, Va, makes iodized lime as follows:

Iodine Resublimed.....gr. xv.
Lime .....gr. 85.

Mix in a mortar Iodized lime in given in doses from 1-3 grain up to 60 grains.

It acts quicker if given in hot water. Iodized lime has some advantages over other forms of iodine for internal use. It is usually well tolerated by the stomach, and in large doses does not produce iodism so quickly as other forms. It is extremely convenient to handle by physicians who do their own dispensing, a thing that all should do.

Iodized lime is said to be a grand remedy for croup. It is generally given in hot water and frequently repeated. It can be given alone or in combination with other remedies.

Dr. Ira Marshall used the following prescription for fourteen years in croup without a single death:

Iodized Calcium.....gr. xij.
Pilocorpine .....gr. ss.
Boiling water.....3ij.
Glycerin .....3j.

M—ft. sol. Sig teaspoonful every twenty minutes until better, than every hour.

The following is of value as a substitute for iodized calcium:

Iodine .....gr. iv.
Potassium Iodide.....gr. xx.
Saccharin .....gr. iv.
Lime water q. s.....ad 3iv.

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Sig.: Dose 15 to 30 drops in hot water every hour. The above can be used when iodized lime is not at hand.

Iodine should be administered sometime before meals as food products impair its therapeutic action by the formation of iodide of starch. It should be given well diluted and if urging in hot water.

Iodine has been used with carbolic acid in cold, etc., and it has been used internally in case of carbolic acid poisoning. It is said that a chemical compound is formed where iodine and carbolic acid is mixed, which is said to be harmless. About equal parts of U. S. P. tincture of iodine and carbolic acid is said to be complimented.

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### THE DUTCHMAN AND HIS DOG.

A Dutchman, addressing his dog, said: "You vas only a dog, but I vish I vas you. Ven you go mit de bed in, you shust durn round dree dimes und lay down. Ven I go mit de bed in, I haf to lock up de blace und vind ub de clock, und put de cat oud, und undress myself, und my vife vakes up und scols me, den de baby cries und I haf to valk him ub und down; den maype ven I shust go to sleep it's dime to get ub again. Ven you get ub you shust stretch yourself und scratch a couple of dimes und you vas ub. I haf to light de fire, put on de kettle, scrap mit my vife already, and maype get some breakfast. You play round all tay und haf blenty of fun. I haf to work all tay und haf blenty of drouble. Ven you die, you vas dead; ven I die I may haf to go to hell yet."

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Heim was a genial soul who practiced in Berlin a century ago, much beloved in all circles for his honesty, good sense and good humor. He said: "The doctor has three faces, that of an angel when the patient sees him at the bedside bearing hope of relief; that of a god when relief has been given; that of a devil when he sends his bill."

Being called to a certain countess, he began in his offhand way: "Well, my dear, what seems to be the matter?" The patient, offended by his lack of formality, said in a haughty tone: Sir! I am a countess." "Well, my dear," said Heim, "I am afraid I can't do anything for that," and left the house.

Heim was a great friend of arsenic. Hufeland reproached him with what he considered to be his too free use of the drug. "What would you do if the Lord should call you to account for the harm you may have done with it?" Tapping Hufeland on the shoulder, Heim answered: "I should say, my dear fellow, that is something you do not understand."

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A famous professor was addressed by a young physician, noted for his conceit and superficiality: "My dear professor, I owe all my knowledge to you." Professor: "Oh Don't bother to mention such trifles."

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The Duke of Villiers was famous for his hard-heartedness. When it was reported that he suffered from symptoms of stone, Piron remarked: "His heart must have fallen into his bladder."

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Dupuytren performed a difficult operation on a rich man and the latter died. A nephew who had inherited a good part of the fortune visited the surgeon and was so fulsome in his appreciation of the skill displayed by Dupuytren that the latter lost his patience and blurted out: "Say! Do you happen to want my services for another uncle?"

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When direct transfusion was first proposed, Volkman considered it a dangerous experiment and opposed it vigorously, saying that for the operation, three animals were necessary: A sheep to get the blood from, a goat to give it to and a jackass to carry out the performance.

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# Some Recent Improved Methods in Orthopaedic Surgery

By B. Trustall Taylor, M. D., Baltimore,

Professor of Orthopedic Surgery in the University of Md. Orthopaedic Surgeon to the University Hospital. Surgeon in Chief to Hospital for Crippled and Deformed Children, Baltimore. Vice-President of the American Orthopaedic Association; Fellow of the Medical and Chirurgical Faculty of Maryland, etc.

ORTHOPEDIC surgery is a branch of medical science that, for some reason or other, pursues its way in comparative quietness and modesty. No fanfare of trumpets attends its progress. Indeed, we hear very little about it—we who are not immediately associated with its specialty. Yet we all of us recognize that it is one of the most important departments of surgical knowledge and work. It is with peculiar pleasure, therefore, that we publish this article of Dr. Taylor, recounting some of the more recent improved methods in treating deformities in children. The author has himself contributed in no small measure to the advance of which he so modestly writes. We commend his paper to the thoughtful perusal of the general practitioner, to whom orthopedics must always be a vitally interesting subject.

Owing to the limited space, it would be impossible to consider in detail the many advances that have been made in Orthopaedic Surgery of late. Perhaps in no branch of surgery has more original work been done in recent years, because there the investigators found fruitful soil for their labors and one that had been much neglected and often relegated to the instrument maker, alike ignorant of anatomy, physiology and pathology.

It is needless to state that this neglect on the part of the medical profession, to which the adjective shameless may be applied, led to a progressive increase in the deformities in a very large proportion of the cases and such individuals, with great mental anguish at not being like other men, carried their distortions to the grave.

What are the watchwords of modern medicine? Early diagnosis, efficient treatment and preventive methods.

In no branch of medicine do preventive methods play a more important part than in orthopaedic surgery and it is to the efficacy of these that the presence or absence of a life-long deformity give the manifestation of failure or success.

Because the case is a chronic or tedious one, is the physician any the less culpable for its neglect at any time during its course, or is it fair to turn its care over to one whom he knows is more familiar with the handling of metals and less familiar with disease and its methods than he himself?

Is this preventive medicine? Is such a physician using every known means in our science to make that patient threatened with deformity like other men?

The application to the specialist for treatment by a person almost hopelessly crippled from neglect or imperfect treatment causes the same sensation which the oculist must feel when a patient, now blind, tells of the application of glasses previously by an optician at a time when retinal hemorrhages existed, were not recognized and their significance and treatment were alike unknown; the dark room and not glasses was indicated. The optician has glasses to sell, an instrument maker, braces.

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I will confine my remarks to Pott's Disease of the Spine, Coxalgia and Congenital Hip Dislocation.

**Pott's Disease.**

In 1894 I felt that simple suspension by the head and axillae in Pott's disease as recommended by the elder Sayre, with which all are now familiar, as depicted in our general surgeries, nor the method of Davy and Brackett, of having the patient prone on a twill cotton hammock preparatory to the application of a plaster of paris jacket simply straightened out the physiological and not the pathological curves of the spine and that they did not fully meet the aims of treatment from a mechanical and anatomical standpoint. This will appear evident from the photographs herewith submitted, and from the following, which I will quote from a previous paper on the subject: "However, Hadra in 1891 suggested the same principle by wiring the spinous processes together, "thereby relieving the vertebral bodies," but in the article it is stated that he has not done this operation in Pott's disease. Other methods to accomplish the same end were published by other observers shortly after. Chipault published on March 9th, 1895, his method of wiring the spinous and transverse processes in Pott's disease after "forcible correction" of the deformity under anaesthesis manual traction on the head and extremities and pressure on the gibbosity. Calot published a paper on similar operations in 1896. Goldthwait reported, in 1898, his and Metzger's excellent method of hyperextension, without anaesthesia, in which the patient lies supine on two strips of steel, that portion of the spine above the knuckle being unsupported and gravity acting as the correcting force. Redard in the same year published his method of mechanical traction in a prone position with anaesthesia and manual pressure on the boss."

In 1899 I presented to the American Orthopedic Association my plaster jacket stool, supplemented with a pressure rod (Fig. 4) to control the point at which hyperextension was to be made (viz., at the kyphosis) and called the apparatus "The Kyphotone," to extend. I found that without pressure on the knuckle in mid-dorsal cases, the lordosis, or hyperextension, frequently was more marked in the lumbar region than in the region of disease and more marked than was desirable, but the pressure rod on the knuckle obviated this, making the region of the gibbosity the centre of this arc (Figs. 5, 6 and 7). The comparative value of suspension and hyperextension in the correction of the deformity of Pott's disease is well shown in the photographs (Figs. 8 and 9. In Fig. 8 (a double photographic exposure) the lower photograph shows the child sitting on the kyphotone and the knuckle is well seen against the background. The upper photograph shows the child suspended by the Sayre headsling and the knuckle is virtually of the same size it was before traction was made. In Fig. 9 we see traction carried upwards and backwards, the pelvis has been made fast and the pressure rod has been applied, causing hyperextension at the knuckle, with the result that the spine is virtually straight.

I also presented a small recumbent kyphotone to be used on very small children and a large recumbent kyphotone to meet the objections (purely rhetorical) that might be raised against even the momentary sitting posture for a child with Pott's disease. We use the upright kyphotone almost exclusively for Pott's disease and the large recumbent machine modified for scoliosis.

In order for any spinal support in Pott's disease below the 6th dorsal vertebra to be efficient, three points of pressure are essential, viz., the kyphos

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posteriorly, and the whole length of the sternum and the anterior superior spines of the ilia anteriorly. When a patient is prone in the hammock method only the lower part of the sternum touches it, and hence, when the plaster bandages are wrapped around the patient and hammock the upper part of the sternum is not pressed against and the resulting jacket is mechanically imperfect. Above the sixth dorsal manifestly the plaster of paris jacket can exert no leverage on the upper segment and the most satisfactory results in the upper regions are obtained by the steel back-brace, head-ring and apron. In conclusion, as to these methods of correcting the deformity of Pott's disease below the sixth dorsal vertebra before ankylosis has begun by the application of plaster of paris jackets, I would say: The jackets thus applied fix the spine in the most advantageous position for lessening the tendency for the production of deformity.

Second: The rapidity and ease with which jackets may be applied.

Third: These methods are applicable to mid and lower dorsal and lumbar caries. Above the sixth dorsal, a steel back-brace with head-support or throat strap must be used.

Fourth: It seems comfortable to the patient, as the thorax is well supported and the superincumbent weight is removed from the diseased vertebral bodies to the healthy articular processes. Quite an appreciable gain has been noticed in the nutrition of patients after this method is used, due largely to the increased lung expansion, which the posture renders possible.

Fifth: Absolute immobilization of the patient in the desired corrected position is obtained, one person being able to apply the methods without assistants to steady the patients, as nothing can slip at the most important moment.

Sixth: Hyperextension has been used constantly in the Hospital for Crippled Children in applying jackets on all suitable cases from 1895 to the present time, and its efficacy has been demonstrated to our satisfaction clinically.

Seventh: Aside from the danger of excessive and unequal force being used manually by several persons making traction for forcible correction "under an anaesthetic, these methods enable one operator to adjust to a nicety his pressure and traction without an anaesthetic and further enable him to make his diagnosis as to the pathological stage the process has reached, which the size of the deformity does not always tell, in regard to the degree of ankylosis."

### Coxalgia.

No instrument has been put in the hands of surgeons in late years that has proven of more diagnostic value than the X-rays. This is especially true in orthopaedics, where changes in the osseous framework or articulations form the largest part of the pathological metomorphosis found.

With skiagraphs of disordered hip-joints one can readily distinguish between congenital dislocation, coxa vara, fracture, sarcoma, syphilitic disease, scurvy and tuberculous hip disease or coxalgia. Further, one can not only recognize the presence of tuberculous disease, but determine its location, extent and the amount of damage done. Thus we can supplement the clinical symptoms of chronic joint disease by seeing whether the disease is in the femoral head or neck or acetabulum. With such data at hand, I was enabled two years ago to present at the meeting of the American Orthopaedic Association the following plan of action, which I now briefly summarize: It is agreed by American orthopaedists that traction yields the best results in the majority of cases of coxalgia with joint motion as an aim in contradistinction to the teachings of the European school of Orthopaedic surgery, which favors fixation

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with anchylosis in a good position as the final aim. Further, we are all agreed that the best treatment of hip disease while acute is to be obtained in bed with the patient fastened down on the bed frame devised by Dr. E. H. Bradford of Boston, whereby traction by weight and pulley can be made on the leg at any desired angle, and this is the most important; for example, if the leg is held rigidly fixed at 45 degrees by the muscular spasm, traction must be made at this angle to get the best result. So with adduction and abduction. The mistake most frequently made by general practitioners in these cases is to allow the child to roll around in bed freely, thus making traction in any angle the child's fancy dictates, and also in having the traction in the plane of the bed. This last often renders the symptoms more acute and both give the disadvantage of confinement in bed without the maximum benefit. It is impossible to go at length into the rationale of this now.

After the acute symptoms subside and parallelism of the legs is restored, we apply some form of long traction splint to continue the traction and put a high shoe on the foot of the well leg to prevent the splint from touching the ground and the patient goes about with crutches until the disease is cured. This conservative treatment gives, in a large number of cases, excellent results, but it requires the most careful attention to details to prevent abcess.

The X-ray made plain a new method of procedure which I adopted, as follows: When a patient with coxalgia is first seen a skiagraph is made to determine the extent of the tuberculous invasion of the articulation. If not extensive and the symptoms do not require immediate operation, conservative methods are used. If at the end of a month or two there is evident extension of the process, as shown by a second X-ray and from the symptoms, I make an incision from the anterior superior spine downward four or five inches in the space between the sensor vaginal femurs and glutens medius muscles externally and the sartorius and rectus medially, and this brings one on the capsule and head of the femur, where tuberculous focus is most frequently situated. When the acetabulum is involved it is usually secondary to involvement of the head, and in removal of the tuberculous focus in the femur with the curette and gouge( erosion of the joint) the acetabulum can subsequently be cleaned out. The joint is then filled with 2½ per cent formalin solution for five minutes. The wick is put to the deepest point in the joint and the skin and fascia are sewed tightly with continuous subcutaneous silver sutures. The child is put to bed, traction reapplied, the wick is removed on the fourth and the stitches on the tenth day. Later crutches, high shoe and traction splint are used, just as though no operation had been done, hence the name that I have given it is "The Combined Treatment of Coxalgia."

The X-rays made after the operation showed a considerable clearing up of the diseased area, a grain in motion and nutrition has been noted in each case and the duration of the disease seems to be materially shortened.

Of course, one cannot be too careful about removing more of an apiphysis in a child than is absolutely necessary, but with a partly or wholly necrotic epiphysis shown in the X-ray and confirmed at the operation, I argue that no greater ultimate shortening will result from the artificial removal than from the unchecked disease. A number of our cases have as yet no shortening, many not more than one-quarter of an inch, and are certainly in a better condition in every other way than other cases in our wards who have not been operated on.

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**Congenital Dislocation of the Hip.**

Any paper at this time on "Recent Improved Methods in Orthopaedic Surgery" would be sadly deficient if mention were not made of the valuable visit paid us by Prof. Adolph Lorenz of Vienna, and Prof. Dr. Albert Hoffa of Berlin, and their demonstrations of their methods in reducing congenital dislocation of the hip. The majority of us who had not had the privilege of seeing their work had depended until these visits in the correction of this deformity on the written or published descriptions, and not a few in America had made two mistakes in technique, namely, of putting the high shoe for what Lorenz called "functional weighting" on the foot of the well leg, instead of the bad one, and in carrying the plaster down to the foot, instead of only to the knee.

The variety of congenital dislocation in which we are interested is the upward and backward form, and to Lorenz, Hoffa and Paci are we chiefly indebted for a clear understanding of the pathological obstacles to reposition and how to overcome them. The older a child grows the more difficult is this reposition, and Lorenz prefers cases under six years, as the soft parts undergo such extreme adaptive shortening between the knee and hip joint, owing to the sliding of the femoral head up on the dorsum of the ilium as the weight increases. In the earliest years the head of the femur is but a short distance from the acetabulum, owing to the small amount of stretching that the capsule has undergone, but later this distance increases and a constriction appears in the capsule between the head and acetabulum, often only permitting the atrophied ligamentam teres to pass from one to the other. This is likened to an hour glass contraction. The acetabulum does not develop from lack of its normal stimulus, becomes filled with fat and connective tissues and the redundant capsule covers and becomes more or less adherent to it. Later changes in the shape of the head and neck occur.

Lorenz found clinically when these facts were known to him that if the muscles, especially the adductors, and the capsule were thoroughly stretched reposition was possible and if maintained for a period of months by a plaster of paris spica which is used in the abducted position, cure was obtainable with mobility.

Hoffa's open operation with the boring of a deeper acetabulum, slitting of the constricted capsule and reposition of the femoral head with the leg abducted and rotated in, is necessary in older children in whom the so-called bloodless reduction is impossible.

2000 Maryland Ave., Baltimore, Md.

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**GLYCERIN AS A BLADDER LAXATIVE.**

O. Franck, in *Zentralb. für Chirurgie,* has noted the property of glycerin to excite contractility of the bladder, and has taken advantage of this property of glycerin in the treatment of a number of cases of post-operative paresis of the bladder. He makes an injection of 15 to 20 Gm. of glycerin into the urethra, with just enough force to overcome the resistance offered by the vesical sphincter. Only a portion of the injection reaches the bladder, but this is usually sufficient to bring about spontaneous urination in about twenty minutes. A permanent restoration of the urinary function usually followed this procedure.

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"Well, did he pay you?" asked the wife of a dentist who had been to collect a bill for a full set of false teeth that he had made for a man almost a year before.

"Pay me?" growled the dentist. "Not only did he refuse to pay me, but he actually had the effrontery to gnash at me—with my teeth!"

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# Clinical Aspects of Emotion and Action

Delivered to the members of the North London Medico-Chirurgical Society, at the Great Northern Hospital, Holloway-road, London, N., on Jan. 12th, 1911.

By Thomas Claye Shaw, M. D. Lond., F. R. C. P. Lond.,
Emeritus Lecturer on Psychological Medicine, St. Bartholomew's Hospital, London.
(From *The Lancet.*)

**Connection Between Feeling and Will.**

IT WILL probably occur to you, and you have the right to ask, if Emotion or Feeling is not a thing by itself but is merely the tone of an idea, does not the very fact of a change in emotional tone connote a change in idea, and *ipso facto* indicate that we are in the presence of a delusion? I think that if you do so contend you are right, and, moreover, that there is present an actual physical basis for your contention, but you would get little or no support from the actual state of the present law. We do not really know what Emotion is, though we do know how intimate are its connections, not only with the central nervous system, but also with the visceral organs of secretion and nutrition, of respiration, and circulation. The law says, "If you have an ill or prejudicial feeling towards another you must use your will to stifle it and not allow it to influence your action." How can you use your will to suppress a process which is really the chief constituent of your will at the moment? Feeling is the main constituent of Will, it is the element which turns the scale in the direction of action, and yet the law refuses to recognize affective insanity. As a learned judge once said to a celebrated lunacy expert, "When you talk of affective insanity you are talking to the wind!" Even Emanuel Swedenborg, imperfect physiologist though he was, recognized the connection between Feeling and Will, for he says,[1] "Those things which affect a man belong to his will, and those things which a man thinks belong to his understanding. Whosoever is not aware that affection is of the will confounds affection with understanding; he says it is one thing with thought, but yet they are not one, though they act as one. That all things of the body are referable to the heart and lungs is known; but that there is a correspondence of the heart and the lungs with the will and the understanding is not known."

**Basis of Emotion.**

If we do not know the real nature of Emotion we do recognize that it is a quality of ideas, that certain forms of ideas have Feelings of kind associated with them, and so we speak of sad or of joyful ideas, as also of indifferent ones, in which no striking emotional tone is to be noted. Now these ideas, we must conceive, have organized physical bases upon which they must depend for their integrity, and as long as these substrata remain entire the disposition, the likes, and dislikes must remain the same. It may be possible by argument, education, or necessity to change a man's ideas and thereby to produce a preponderance of emotional tone in a direction contrary to what it was, but the old ideas with their *propria* of tone are not destroyed and usually remain in consciousness even under the new mask, whilst they materially modify any conduct which the new ideas may suggest. As the popular saying goes, "The man still remains faithful to his old love," and is easily brought back into its tracks. Suppose, however, that from disease of an irritating or destructive nature—a lesion, in fact—certain tracts of tissue become involved which are the carriers of grades of ideas with their accompanying tones, it is evi-

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dent that the whole trend of nature and education may be altered and Emotions of a contrary form set up which suggestion and expostulation are incompetent to cope with. But if so, this must be due to disease or to such disuse of structure as amounts to a practical atrophy and loss of competence to function. This, then, it is which turns love to hate; not a change due to the substitution of the quality of an idea into one of an opposite kind, but the substantial obliteration of a material which functioned in a definite way and its replacement by the growth of a different set of processes.

You, then, may say that this process of changed emotion by the growth of opposite ideas of which Emotion is the appanage can surely not be distinguished from a delusion, is in fact a delusion, and must be treated as such, I repeat that I am quite prepared to grant the force of this argument, for to my mind Emotion is the local sign of the idea, and on the theory of the physical basis of mentation it is the key to the position, but to the outsider what is most striking is the loudness of the tone, and he is apt to ignore the fact that it denotes a change in the structural basis of ideas, supplemented as these must be by arguments, started from the new trend and reinforced by association and its recognized laws. Emotion is, etymologically, the moving force of the idea; more than anything else it causes the idea to issue in action—this it is which stirs in oratory, which makes the enduring obstinacy of the martyr, which forces on the impulsive acts of the murderer, and which determines the course of the social system to a greater extent than any other factor which we can adduce from the analysis of a mental content. There are persons in whom the emotional tone is feeble, and this placidity has its advantages, for it saves them from the perturbation, now on the crest of the wave of success, now in the trough of failure and despair, of their more sensitive compeers; it makes its possessors exponents of what is called the calm logic of facts, though it deprives them of that cataractic force which can overcome Reason by the *vis viva* of Feeling. There are many who are unconscious of the idea when in the presence of strong Emotion, and the accumulated tone when many associated ideas are acting in harmony blinds the agent to the nature of his thought and urges him to an action which, though consonant with his Feeling, is opposed to his best interests. Says King Lear:

"The tempest in my mind
Doth from my senses take all feeling else."

Shakespeare did not know the word "Emotion," at least he never once uses it, bue he was quick to recognize the effect upon consciousness of strong Feeling. I can quote the case of a man whose early life was not what it should have been, and who, being placed in a position of great responsibility, got to feel his inadequacy upon moral grounds to retain it, yet to his friends there was no insanity present; he simply said that he was depressed and made no sign, gave no outward indication by conduct or conversation. All the same, his excessive emotional tone incapacitated him from following his vocation, and whereas matters which formerly caused him not a second thought now became so obsessional as to constitute an actual derangement. "The evil that men do live after them," says our great poet—it is, unfortunately, true that on occasion it becomes dominant during life and shatters the integrity of mind as a whole, leaving an impotent detritus.

**Action.**

If we now turn away from the subject of Emotion and take up that of Action we notice that changes in this sphere may be the only signs of insanity, but they are so urgent that it becomes necessary to act upon them, though to do so

[1]Divine Love and Wisdom.

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requires, at times, some courage and much daring. Action is the key to internal thought, but just as "language was invented to conceal thought," I do not mean to say that action of necessity shows all that we really think; it, in reality, may be an indication of only part of what is thought and not what is the true belief of the agent; but, even so, it is the result of a certain mental process the motives of which may not be apparent or accessible, and often are so latent that we cannot use them for our purpose when the object is to restrain the individual.

Crime of the worst kind is not always owing to insanity, indeed, many criminals are sane and clever, and their acts are the legitimate and necessary products of a sound organization. It is a wicked and a punishable offense to kill another person for selfish purposes, but there is not necessarily any insanity in it. The deliberate murderer thinks nothing of the wickedness, and he uses all his intellect (not infrequently with success) to avoid the punishment. I am not speaking now of impulsive acts where the accession of a sudden emotion of overwhelming intensity leads to the commission of crime, but of a continued and apparently deliberate line of action, and the question arises, how are we to distinguish between acts the result of a sound, but wicked or ignorant and uneducated, mental constitution from acts which are the result of disease, but where none of the legal tests of insanity can be adduced, where there are no delusions, no hallucinations, no incoherence, no indications by conduct in the ordinary amenities of life, where the person may know not only what he is doing, but also that in the abstract he is wrong, and yet we shall be right in coming to the conclusion that he is really insane and irresponsible—that is, that he is suffering from disease or from imperfection? A concrete example of what I mean would run as follows: A man in good social position and possessed of adequate means carries on his social responsibilties with capacity and decorum for a number of years until he meets with an accident to his head. Soon after that his conduct changes, he becomes involved in dealings of a licentious and compromising character, is blackmailed, and loses large sums of money, reducing his family from affluence to narrow straits, so that the question arises as to his sanity. To talk to, the patient is coherent, gives perhaps a few sentimental reasons for his conduct, but shows no delusions; to those with whom he is casually brought into contact he is apparently quite sane. Upon these latter persons there comes one day a thunderbolt in the knowledge that lunacy certificates have been made out and that he is deprived of responsibility. When it comes to the question of regulating the administration of his property he has the power of demanding a jury, and if this is accorded all the previous work is undone, for an ordinary, or even a special, jury cannot understand that a man is insane who has no delusions and is able to answer ordinary questions. Fortunately, in most cases a jury is not demanded, and the decision rests with expert judges who know by experience that action alone may be the true test of an insanity, and that the present state of the law is not always adequate to determine these difficult cases. The best referees in these conduct cases are the general practitioners, who alone have the special opportunities formed by their medical training of correctly appreciating such aids to diagnosis as are afforded by noticing any change of temperament or of habits and customs, etc., which emphasize the conclusion that some radical defect in nervous constitution is the basis of these depraved actions.

The general practitioner as a practical psychologist, trained by experience in the school of observation, is the man

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in whose hands lies more than in any others the determination of the real nature of these disturbances of emotion and action, he is constantly at work in the human laboratory of causes and effects, and if to his never-ending school of phrenology he can add the analysis that training in psychology gives we have all that is required for the proper appreciation of what man is intended to be—a machine to think and to act.

**Treatment.**

And now it becomes necessary to ask how far we can go towards the cure of the two conditions which I have been elaborating. Can these mental atoms be got at except through structure? Is there a mind apart from the body? We are calling out for something definite to go upon, and as yet all our advance is in the direction of procuring a healthy and sound structure. Strive as we will, the demonstration of mind — what is called the spiritual mind—seems as far off as ever. We talk of psycho-physical parallelism and elevate it to the rank of the most recent and scientific explanation that can be held, but the very existence of the term shows that Brain and Mind are not cause and effect, that we do really hold that there is an undemonstrated mental process apart from the body, but acting through and with it. If a person comes with the complaint of change of feelings towards those who ought to be nearest and dearest, if he complains of lost power of Attention and Will, are we simply to look for some bodily defect and direct all our energies to remedying or modifying that? At present it looks like it; but I do not hesitate to say that though we shall often be right in pointing to some diseased corporal condition we cannot always detect it, nor can we indeed be sure that in all cases it exists.

It is piteous to have to listen to the plaints of emotional stress, of want of energy, of loss of power of concentration, of insomnia, etc., and after a careful but fruitless examination of the bodily organs to find oneself unable to do anything to relieve the condition beyond advising change of scene or such gross temporary expedients as sedatives and narcotics. We feel that we should like to get hold of that spiritual mind and compel it to a proper influence, but even if we could have no pharmacopœia of remedies for it. We are tortured by discordant strains and on looking for the cause we find that the instrument is in perfect order, but that it is the performer who is at fault. Where is the performer on the brain instrument? No doubt the performer is often eager—oh! so eager—to have the instrument altered to his requirements, chafes at the defect which converts his best wishes to unsupportable discord, but is this always the case? Is not the performer frequently at fault, though we cannot unseat him? Mr. Ballance told me of a boy, an incorrigible thief, who was completely cured of his bad habits by the operation of trephining. Whether the operation was successful by relieving pressure I do not know, but anyhow it was an extraordinary result to obtain a complete change in mental trend from an alteration in physical conditions. I once had a case of a lady who gave utterance to the most fearful delusions of the persecution kind and was grievously depressed. She had an attack of erysipelas, and during the course of the disorder her depression and delusions completely disappeared, and she was perfectly sane. Was the insanity of this lady due to brain disorder (perhaps of a toxic nature) which was for the time cured by the presence of new micro-organisms? Perhaps; but if so it points out how long-continued disordered brain action may exist without radical impairment of structure.

It was hoped that some progress was being made in our knowledge of the nature of mind when the study of psychophysics was introduced, but the results,

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though very interesting as regards the way in which bodily processes and mental phenomena interact, can scarcely be said to have enlightened us on the real question. Some time ago Wundt of Leipzig, in discussing Weber's and Fechner's laws, made the following statement: "Not only have we discovered the law of the dependency of sensation upon stimulus, but we have indicated the method by which the intensity either of sensation or of stimulus can be calculated when the intensity of its correlate is given. The method is simplicity itself, for it pre-supposes no more knowledge than the multiplication-table and no more apparatus than a book of logarithms"—and very much the same may be said of Ebbinghaus' law of memory. But after all this is only another way of regarding the same thing, and it does nothing in the way of showing us the real nature of the mental processes. And yet in the face of some apparent successes it does not seem right to let the mental symptoms follow their own course without some attempt to check or to modify them, after we have definitely concluded that there is no structural defect in the nerve centres and tracts. I come across people who are quite well as far as can be ascertained in their bodily processes, and yet who suffer intensely. At present suggestion, with or without hypnotism, seems to do more good than anything else. I have known a lady cured of insomnia, depression, and headache by the very natural process of having a baby. Was this a physical cure (in a way which certainly cannot be understood) or was it a mental cure, by giving her something to think about in place of the *ennui* of uneventful married life, thus providing occupation and mental relief?

We know the curative effect of time upon emotional states, how the most poignant grief (and this without any marked structural process) degenerates into an easily portable placidity merely by the action of a moderating influence, which, whilst leaving intact the idea, robs it of emotional sting. You may say that through the agency of time the idea has lost its intensity through diversion of tracts to some other quarter, but this is not so, because we can prove that the idea remains in all its vividness and can be as fully discussed as ever, but it has lost its tone—it no longer affects—in a word, its accompaniment of Emotion has left it for ever.

I am not without confidence in affirming that notwithstanding the general despair as to success in improving mental symptoms when simply physical treatment seems useless there is yet ground for the belief that we may do good service by a system of mental training; but constant and personal attention is indispensable, and the process is apt to be tedious and is certainly expensive.

Perhaps I may for a moment refer to the very proper insistence made by the Lunacy Commissioners against the too common practice of placing very large numbers of insane persons under limited medical supervision. It is argued, and in my opinion correctly, that persons gradually lapse into a state of dementia because such mental energy as remains is neglected, and that if individual attention could be given the revival of nervous energy would be assured. Of the truth of this I am certain. I have often taken in hand apparently hopeless cases, and by regularly talking to them and trying to arouse dormant mental states I have succeeded in replacing listlessness by energy, apathy by attention, and impulse by deliberate will action.

In dealing with private patients the importance of small homes cannot be exaggerated, and, if possible, change of surroundings should be given, because the patience of an individual becomes weakened by too continuous effort and there is novelty in change. Where, as in public schools, there is a very large number of pupils the indifferent plodders are apt to go to the wall and only

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those of brilliant promise are selected for special exhibition, so is it in overcrowded establishments—those of ponderous inactivity are left to their broodings, and recovery is blighted where a timely and continuous stimulus might be of inconceivable value.

It is above all things necessary in treating cases of emotional alteration to place them in new surroundings, away from family influences, to persist in methods calculated to arouse new ideas with their own peculiar emotional tones, so as to let the old ones starve by inanition—not so much to leave the individual to fight his own morbid thoughts (a process which often tends to emphasize the disordered function, because the very fact of trying to overcome it keeps strongly in consciousness the one thing which we are seeking to weaken)—not, I say, to leave the patient alone to struggle with his obsessions, but to take away ourselves the weight from him, to release him of the burden which he vainly tries to shuffle off. It is in this way that Suggestion becomes a powerful agent, not by pooh-poohing certain painful feeling and saying that they do not exist, but by ignoring them and setting up other strong tones, whilst we allow Time to aid us in subduing old influences. The patient must be kept going in new tracks, whilst the old footsteps are gradually made faint, not by his own scattering of oblivious sand, but by a gradual and final desuetude. This is the *rationale* of Freud's treatment, and it is easy to perceive how long and tedious the cure may be.

If by these means we can set up a change in the emotional tone it is but a step further to obtain success in increasing Inhibition, in strengthening the Will, because as new processes are set up so do the old constituents of the old Will fade and a new Inhibitory power is inducted. We do not call upon the patient to exert a Will which by its essential composition is a part of the same morbid process as the Emotion, but we try to induce a new Will in harmony with the new emotions which we are seeking to arouse, a new Inhibitory Force which shall so uproot past troubles that their very existence is a lost memory. I have noticed with this emotional change that there is often an irritability of general demeanor, patients become peevish and discontented, a state compounded of despair and anger; they go from one practitioner to another, are told that there is nothing the matter with them and that it is merely a case requiring time. Then, finding that they do not get well, they naturally become hopeless and desperate, unbearable to themselves and others.

It is a mistake to tell these people that there is nothing the matter with them. Is it likely that they delight in spending their money on medical men, in the gloom of separation from amusements and family duties? What they want is disciplined treatment, not the ordinary form of rest-cure, but residence in good hygienic conditions under some one who, whilst having plenty of sympathy, can mix it with firmness and authority, so as to check the ramifications of disordered Feeling and make the patient feel how to help himself.

You will notice that it is chiefly among the better classes that the symptoms of which I have been speaking occur; the lower classes do not suffer so much in this way; they have occupation all the day long; they have large families and are not dependent on the theaters and the golf-clubs for their diversions; for these Time is all too short, for the others it is too long and tedious. You have only to turn to the law reports to see how responsible are the sudden outbursts of Emotion for crimes of all kinds—blind fury, the hasty deed, unconsciousness of all process of thought at the time, then the hasty repentance, and to all this the law is blind as regards mitigation—says, in fact, "That is what I am here for—to check."

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# Suprarenal Extract in Vicarious Hemorrhage

By Joseph W. Irwin, M. D., Louisville, Ky.,

Formerly Professor of the Principles and Practice of Medicine in the Kentucky School of Medicine.

THE case I report is one of a series of cases that are sometimes rather perplexing to the general practitioner.

From time to time we meet with cases of hemorrhage of the rectum not due to the ordinary causes, such as hemorrhoids, fissures, lacerations, abrasions, etc. We denominate such hemorrhages as vicarious, usually preceding the menstrual period or occurring at that time, taking the place of menstruation.

A young lady, seventeen years of age, consulted me, having had for six or eight months previously troublesome rectal hemorrhages. An investigation was ordered and made by a rectal specialist, who reported that he could find nothing wrong with the rectum beyond a slight hyperaemic condition just above the internal sphincter ani. I made a subsequent examination and confirmed the specialist's diagnosis. Observing the case for a few weeks subsequently, I found that hemorrhage occurred periodically and usually preceded the menstrual discharge four or five days. The menstrual discharge was scanty, very light colored, and attended with mild dysmenorrhoea.

I concluded to try a more or less recent remedy for the relief of the hemorrhage. I prescribed suprarenal extract, 1-1000 solution, fifteen drops to be taken every three hours until the hemorrhage ceased. The second dose relieved the hemorrhage and no more of the remedy was taken at that time. The following menstruation occurred normally, no rectal hemorrhage attended it. The second month slight rectal hemorrhage occurred again, when two or three doses of the suprarenal extract afforded prompt and complete relief.

I have seen within the past year five or six such cases, not always hemorrhage of the rectum, but hemorrhage from the inner canthus of the eye, of the nose, etc., and always of a vicarious character, and in every instance I have prescribed the suprarenal extract and secured prompt relief for these patients. I am convinced from the experience I have had with the use of this drug in other hemorrhagic conditions as well, that complete cures will ultimately follow its use from time to time.

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## REMOVAL OF ADHESIVE PLASTER.

Difficulty is often experienced and pain and discomfort to the patient in the removal of adhesive plaster, especially over hairy parts. Oil of wintergreen applied directly to the plaster spreads throughout the adhesive material and causes it to come away readily and painlessly. When extensive areas are to be be removed the application of an ointment of adepislanæ hydrosus, with 10 per cent of oil of wintergreen incorporated, is even more useful than the oil alone.

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"He escaped with a sprained ankle, which is remarkable, as the machine struck him between the lamp and the radiator."—Sibley (Ia.) *Gazette.* Reminds you of the man who was shot in the oil regions.

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# Deafness Caused by Telephones

By Herbert Lanier, M. D., Kansas City, Mo.

THE auditory nerve is the most impressionable of all the nerves of special sense. It is a well known fact that sounds to which we are not accustomed, such as that caused by the make and break of the current from telephone batteries, frequently due to the operator's carelessness, exert a direct influence on the auditory perceptive mechanism.

Few realize how seriously the hearing may be impaired by the sharp popping noises so frequently heard in telephone receivers. To have normal hearing, a pressure of 15 pounds per square inch must be maintained on both sides of the drumhead. The eustachain tube leading from the pharynx to the tympanic cavity permits ventilation, and the normal air pressure within, and the entrance of air through the ear externally exerts an even pressure on both sides of the drumhead.

These sharp cracking noises so near the ear raise the air pressure sufficiently to force the drumhead inward. Since there is not a corresponding increase of pressure in the tympanic cavity to balance the drumhead, it destroys the normal tension of the drumhead.

Anything which disturbs the normal tension of the drumhead and assicular chain will diminish or abolish the hearing for two or three lower octones, and any disturbance of the perceptive apparatus will diminish the intensity of hearing.

These noises also cause hyperemia and congestion and stimulate secrelion and effusion into the labyrinth, causing abnormal pressure on terminal nerve filaments, resulting in tinitus aurium, neuralgia of ear, vertigo and dizziness.

The noises attendant upon the pursuit of certain occupations destroy the hearing very rapidly, as is found in gunners in the navy, tunnel workers and miners. Where explosions are used—boiler makers and those in similar occupations—these noises frequently raise the air pressure so much that the drumhead will be ruptured or torn completely in two, hence the danger of permanently injuring one's hearing by the seemingly innocent noises heard in telephone receivers. Yet experts in telephone construction say this evil is absolutely avoidable. Telephone operators, take notice.



### BASEBALL IN BIBLE TIMES.

Sihon pitched in Gahaz and fought against Israel.—Judges.

He put forth his hand and caught it.—Exodus.

And he struck it into the pan.—I. Sam.

And he said unto him, Run!—II. Sam.

So they ran both together.—John.

Ahaz cut off the borders of the bases.—II. Kings.

Archer hit him and he was sore wounded.—I. Sam.—B. L. T., in *Chicago Tribune.*

### A CHEVALIER DE HIKE.

*Lady*—"You do seem to be the very worst looking tramp I've ever seen."

*Pinky*—"Whoa, Leddy; back up! It's only in de presence of such unusual beauty dat I looks me worst."



Chapellier relates that having made two laparotomies on a patient, he found that he had left a pair of scissors in the abdomen and was obliged to open it a third time. While putting in the closing sutures the patient waked up and said: "Say, doctor, what's the use of sewing me up? Why don't you put on some buttons?"

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# CURRENT MEDICAL LITERATURE.

## CLASSIFICATION OF INEBRIATES.

CHAS. A. ROSENWASSER, in the *Medical Record,* recognizes various types of cases, and, while, of course, individual cases present individual features, he thinks there is a certain similarity which permits of their classification into groups. For practical purposes he arranges five such groups. They will be briefly considered.

*Group* 1. This includes the large number of persons who, while attending to their usual vocations, are daily consuming a small amount of alcohol in some form, and who have the drink habit without knowing it. They do not get drunk in the ordinary sense of the word, they do not stagger or lose control of themselves perceptibly, but they are more or less braced up by alcohol much of the time. They are usually considered to be moderate drinkers, and almost never apply for treatment for the habit. They are of interest, however, as representing the army from which the true inebriates are recruited.

*Group* 2. This group comprises persons who have gradually developed from what are commonly called moderate drinkers to more or less constant heavy drinkers. The individual may or may not get perceptibly drunk at times, but it is plain that he is drinking too much. He begins to grow neglectful of himself and affairs, does not keep his business appointments, and is prone to forget his obligations to his family and to society in general. It is for the members of this group that office treatment holds out the greatest hope.

*Group* 3. This group is composed of those inebriates who are subject to periodical sprees, and who between the attacks are usually sober citizens, total abstainers, in fact. During the spree it is usually necessary to overlook their wishes and deal with them as we would with any patient bereft of his senses. Restraint is often necessary. This can sometimes be accomplished by keeping the patient under the care of an intelligent nurse for a few days, or placing him in a hospital. When the attack is over most of these patients are as well as they ever will be, irrespective of the treatment applied, for periodical dipsomania is usually a manifestation of epilepsy or manic-depressive insanity, and complete recovery is decidedly rare. For many of these patients, office treatment is of value, however, for they can in some instances be taught to live so that the attacks will be less numerous and less severe, and also how to foretell the onset of the attack and to return at once for treatment on the first indication that an attack is imminent. This class of patients will tax one's patience to the extreme, but the condition is by no means hopeless. If we but get the patient to return to us in the hour of trouble and lessen the attacks and shorten their duration we will have accomplished something worth working for.

*Group* 4. This group is composed of inebriates who have become unable to or less drunk most of the time, they are a menace to themselves and to society. They are the individuals we see drunk upon the streets or in our police courts and jails, if they are poor, or leading wild and riotious lives and spending days and weeks in drunken revelry if they are rich. These are the patients demanding custodial care, for whose families sanatoria are a blessing. For some of the members of this group, detention over a period of years under legal commitment on a compulsory labor farm holds out a faint hope.

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*Group* 5. This group consists of inebriates who fail to provide for their families, beat their wives, and otherwise misconduct themselves. They are, of course, subjects for the police, but ought in every instance be put through a thorough mental examination, for many of them are utterly irresponsible and ought to be placed in insane asylums. Prolonged detention, under legal commitment, on a compulsory labor farm holds out practically the only hope for some of these individuals.

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## PROFESSIONAL JEALOUSY AND RIVALRY.

Geo. F. Butler, in his twilight Talk in the *New York Medical Journal,* impresses upon the mind of the doctor the futility of contentions, jealousies, and petty rivalry which so often mar the harmony of our profession and the importance of cultivating a spirit of charity, of generous tolerance, and "sweet reasonableness."

It is a woeful waste of time, these idle bickerings about methods and precedence of discovery or adoption and the comparative merits of this or that ephemeral line of professional achievements. I am charitable enough to believe that the great majority of physicians, of whatever individual opinion, are manfully and conscientiously endeavoring to assist Nature in the alleviation of human suffering and that in the pursuit of so high a calling, which involves at times the utmost limits of self sacrifice, they are actuated by a zeal no less intrepid and an enthusiasm no less vital than inspired the good Terentian verse:

Homo sum: humani nihil a me alienum puto.

We live in an epoch of unprecedented medical and surgical activity. The amount of medical literature is well nigh overwhelming. Amid such a wealth of resources it seems fatuous to dogmatize and dispute, the attitude of the doctrinaire being never a high minded and charitable one. Yet arbitrary statements are too often made by those high in authority regarding the value or futility of certain method of treatment. In the contentions arising from these truly progressive stages of development, we should be careful to give full credit to the sincerity of purpose from which they emanate. Do we alone, forsooth, possess the golden thread of knowledge which is to guide us through the labyrinthine mazes of science? Shall we monopolize truth, to the exclusion of those whose ardor and capacity are commensurate with our own? Can we, in a word, be sure of anything, save our own liability to error? Arago dared to assert that "nothing is absolutely certain outside the realm of pure mathematics."

Not long ago, the author heard an able, earnest, country doctor read a paper on the treatment of erysipelas with a certain plant found in the locality where he resided, whereupon a certain surgeon, who knew nothing whatever about the treatment the doctor recommended, proceeded to "roast" the reader of the paper and ridicule the method as being absurd and unscientific. We cannot afford to belittle the results of such observation and experience.

In the struggle for progress, medicine has often turned from its great masters to the patient toilers in rural districts whose work, when it was finished, remained to afford a foothold to those who came after. And in this, lie the present greatness and the hope of every true science.

The very man whose theories we deride to-day may to-morrow prove to have been far wiser than we. When Ericsson, the inventor of the twin screw, offered his discovery to the British board of admiralty, they laughed him to scorn, declaring that it would be hopeless to attempt to *steer* a vessel while such an apparatus was attached to it. But a short time after the screw was

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adopted, a great ocean liner, having lost her helm, was triumphantly guided into port by her twin screws!

In this age of invention and marvelous discoveries in medicine and science, it need scarcely be said that it behooves us all to maintain an attitude of the widest toleration. Let us be liberal, with our minds open to conviction. If our opponent is wise we should hesitate to impugn his talents and earnestness, even though they mitigate against some pet conceit of our own. If he is ignorant, he may yet be sincere. And who of us has not at some period been guilty of the grossest incapacity? Thackeray said "a man who has reached the age of thirty and never made a fool of himself *is* a fool."

No thoughtful physician can fail to see the immense advantage of a liberal mind in the pursuit of truth. It is to the honor of the scientific world that its most distinguished savants have been characterized by a noteworthy freedom from illiberality. Wallace undoubtedly discovered the general theory of natural selection which Darwin so brilliantly elaborated. How noble is the spectacle of these two men vying with one another in their desire to accord, each to his friend, the praise of that transcendent intuition! What a lesson of humility and love of truth! It is of signal importance that the physician should not only welcome every advancement, especially in therapeutics, but he should at all times be willing to put the broadest construction upon opinions conflicting with his own.

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## BAD RESULTS OF PARAFFIN INJECTIONS.

Robert Abbé presented a case to the Practitioners Society of New York to illustrate the detrimental effects of the use of paraffine to remedy facial deformity. The patient was a stenographer who had suffered in early youth a hemiatrophy of the lower jaw with depressed cicatrix on one side, due to bone necrosis following caries of molar teeth. To remedy this facial deformity she visited an able surgeon in this city, who injected paraffine on both sides with apparently excellent cosmetic effect satisfactory to the patient and himself for more than two years. The paraffin had been injected at a temperature of 110° F., and to overcome the depression in the cheek a rather large injection was given in that part, which puffed out the cheek. This was well placed and raised the scar, but it also made a mass which later extended across the lip. During the past year there had been a progressive settling of the paraffin into the chin, giving it a very dark color in the daytime. Now the entire breadth of the chin was of dusky violet hue and adamantine quality due to the setting of the paraffine into areolar and cutaneous structures, leaving but a thin layer of skin stretched over all, with a long crease below the chin, which opened spontaneously and oozed lymph. The patient was present in the hope of eliciting some idea of method of correction. One thought suggesting itself as a possible remedy was the use of heat sufficient to raise the temperature of the imbedded paraffin to model it into better shape, but this was a delicate procedure. Personally the speaker did not feel inclined to touch it. If some temperature change was brought about it might make it plastic and modeling possible. This might be done, but where it had now come to the surface he doubted if this could be done with safety. Dr. Abbe said that he had never used paraffin injection, for he had never thought that it was a safe procedure. Since it was in vogue, however, he presented this patient so that by observation the possibility of ill effects from its use might be seen. He had seen three cases in which women's faces had been badly marked, although the intention in each case was good. He recalled cases of two other ladies who had submitted to this treat-

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ment for obliteration of furrows in both cheeks, where the paraffin made two masses of yellowish white as broad as the finger on both sides of the face. The ladies wore veils and gave up society because of this deformity. His purpose in presenting the case was to illustrate what may happen from what may at first seem a good procedure.

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## TREATMENT OF AMEBIC DYSENTERY.

The Journal of the A. M. A. states that in just what way the ipecac produces its beneficial effect has not been determined, but it seems probable that either it, or some product resulting from its decomposition, inhibits the development of the ameba.

It is sometimes advisable to administer a laxative with the idea of removing the amebas from the intestinal canal. Castor oil has been recommended for this, but probably one of the salines, either the sulphate of magnesium or sulphate of sodium, is preferable. A good combination is the following:

| | Gm. or c. c. | | |
|---|---|---|---|
| Magnesii sulphatis..... | 25 | | ʒi. |
| Acidi sulphurici aromatici. | 10 | or | fl. ʒiiss. |
| Syrupi zingiberis..... | 50 | | fl. ʒii. |
| Aquæ .....ad | 100 | | ad fl. ʒiv. |

M. et Sig.: One teaspoonful in water every four hours.

This will have a laxative effect with a secondary astringent effect, due to the sulphuric acid.

Bismuth subcarbonate may be administered in large doses, but the value of this is often problematical. However, if the inflammation is in the cecum or has migrated into the ileum, the bismuth is probably of value. Bismuth, however, must not be too long continued, as it tends to form scybalous masses and cause more irritation and more inflammation.

If the movements are very frequent, or there is much pain, sulphate of morphin may be administered subcutaneously, or suppositories containing extract of opium may be used, as in the following prescription:

| | Gm. or c. c. | | |
|---|---|---|---|
| Extracti opii..... | 60 | | gr. x. |
| Olei theobromatis.....20 | | or | ʒv. |

Fac suppositoria 20.

Sig.: Use one suppository every four hours, if needed.

But far more important than these internal laxatives, astringents, and sedatives is the local treatment. This consists of enemata given with the idea of washing out the rectum and irrigating and cleansing the entire colon. The use of a simple salt solution, distinctly stronger than physiologic saline (which is about 0.7 per cent.) is recommended by many for washing out the rectum and colon, and is believed to have some destructive effect on the amebas. This destructive action is greatly increased if the enema is administered at the low temperature of 70° F., at which temperature the ameba finds it difficult to continue life. Water of this temperature may be used in the rectum, but should not be used in the colon.

Sulphate of quinin is believed by many to be specific in its destructive action on the ameba, and is much used for irrigating the rectum and colon. It should be used in a 1 to 5,000 to 1 to 1,000 solution. Cures are believed to have been effected by such irrigations in many cases.

If, in spite of the remedies which have been enumerated, the case still continues rebellious, resort to surgical interference may be deemed advisable, and appendicostomy may be performed, and irrigation of the colon by means of the insertion of an irrigation tube through the appendix may be practiced.

Great care and patience are required in the treatment of this disease, and the treatment should be long continued, and after the patient is apparently cured, he should be kept under observation for months in order that, if a relapse occurs, treatment may be promptly instituted.

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### LABYRINTHINE SUPPURATION.

The correspondent of the *Medical Record* reports that new observations on labyrinthine suppuration have been reported by Prof. Adam Politzer before the Practitioners' Society. Eighteen fatal cases of otitic complications that had been carefully studied during life, showed at autopsy in ten cases marked anatomical changes in the labyrinth, while in eight cases, in spite of profound changes in the middle ear, no demonstrable changes in the labyrinth were found. The following lesions were found: 1. Perforation of both fenestra of the labyrinth, with penetration of the pus into the interior of the labyrinth. 2. Fistulous openings in the semicircular canals and on the inner wall of the tympanum. 3. Destruction of the epithelial framework of the labyrinth, and of the organ of Corti. 4. Disappearance of the bony wall of the labyrinth and of the modiolus of the cochlea with perforation into the inner auditory canal. 5. Inflammatory changes in the latter and suppurative infiltration of the auditory nerve. 6. Connective tissue and osseous neoplastic formation in the cochlea as the result of an old inflammatory process that had run its course in the labyrinth. As otitic complications with lethal outcome there were evident meningitis, extradural abscess, cerebellar abscess, temperosphnoidal abscess, and sinus throbbosis. According to the statistics of Politzer's clinic, the fatal outcome in more than half of the cases was due to a meningitis resulting from an infection by way of the labyrinth. Politzer has shown that this complication proceeds preferably through the cochlea. He rejects those operative methods that are confined to a breaking down of the semicircular canals and an opening up of the vestibule, and lays down the postulate that the operative clearing out of the cochlea, and, therefore, the eradication of the dangerous focus of suppuration in the labyrinth, are necessary. In the presence of extradural abscess and of intracranial complications, the method of Jansen-Neumann is indicated, namely, the removal of the posterior pyramidal wall and the opening up of the labyrinth from the median side. On the other hand, in the case of labyrinthine suppurations without cerebal complications, Politzer recommends the removal of the wall of the promontory and the wide opening up of the vestibule and cochlea, which are to be thoroughly cleared out. The advantage of this method is the impossibility thereby of wounding the facial nerve.

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### DIAGNOSIS OF DISEASES OF THE LIVER.

The *Medical Record* cites an important series of investigations on this subject have been carried out in the medical clinics of Basle, by W. Frey, who contributes the results of his observations in the *Zeitschrift fùr Klinsche Medizin*. He finds that urobilinuria is a frequent manifestation of affections of the liver, denoting a functionally impaired organ if one can exclude, on the one hand, the occurrence of a diminution of the fecal urobilin, and on the other hand, an increased formation of urobilin, as by the destruction of red blood-cells. The administration of levulose is an important means of testing the functional capacity of the liver. In healthy individuals, alimentary levulosuria occurs in 10 per cent. of the cases, while in those suffering from hepatic disorders alimentary levulosuria occurs in 50 per cent. of the cases. Among these cases instances of cirrhosis are largely represented, although the symptoms may occasionally fail. The employment of galactose is of inferior value in this test. The determination of urea in the urine furnishes no criterion of any existing disease of the liver. The excretion of ammonia, however, is increased in hepatic disorders, and is exceptionally high in the cirrhoses. The diagnostic value

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of this sign is compromised by the existence of similar figures in the case of excessive meat diet, fever, and various diseases that lead to acidosis.

The determination of the amino-acids furnishes an important diagnostic criterion. These acids are regularly increased (above 0.5 gram N.) in the cirrhoses. The significance of this sign is all the greater in view of the fact that Frey observed this abnormality only in one case of amyloid liver, and in one case of marked congestion of the liver, among a large nnumber of cases he had investigated. Among diseases of other organs, hyperacidaminuria was noted in pneumonia, typhoid fever, and pancreatic diabetes. The diseased liver is capable of disposing of ingested animo-acids as well as the healthy organ.

It is hoped that the development of these, as well as of other methods of diagnosis, will render possible the early recognition and differentiation of heptatic disease with a faccility equal to that of the urinary diagnosis of diseases of the kidney.

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### A NEW PHYSICAL SIGN.

Textbooks on physical diagnosis says the *New York Medical Journal* usually state that the upper limit of the absolute liver dullness begins posteriorly at midline and only anteriorly crosses the middle of the abdomen. Any dullness posterior to the left of the midspinal line is not accounted for, as a rule, by any increase or transposition of the liver limits. Yet Grocco, who has already pointed out a neglected physical sign, the so-called Grocco's paravertebral triangle, in cases of pleurisy with effusion, again takes issue with the textbook descriptions. Careful physical examinations of patients, combined with the observation of anatomical and pathological material, have shown to him that even the normal limits of absolute liver dullness pass beyond the midspinal line and extend for from 3 1-2 to 5 cm. to the left. In cases of enlargement of the liver the posterior boundary is, of course, moved still further to the left, sometimes reaching as far as 12 cm. to the left of the midline. Grocco has examined over three hundred normal and abnormal persons in reference to this point and gives in the *Wiener klinische Wochenschrift* for May 11, 1911, detailed directions for demonstrating his new physical sign. Of course, the determination of the left boundary of the liver posteriorly should prove of interest in cases where enlargement of the left lobe is suspected. Whether such determination will prove of much clinical value, remains to be seen. Grocco himself thinks that in the future this new physical sign will be elicited as an important part of the routine physical examination of the thorax and abdomen.

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### HOT AIR DOUCHES IN NEURITIS.

Leopold Stieghtz, in the *Medical Record,* says the main principles of the actual cure of the disease can be summed up in two words: Rest and heat. In the severer cases little or no headway will be made until the patient is put to bed and kept there till he is well on the way toward recovery, and then the return to active life should be gradual and cautious; a premature use of the affected limb is punished almost invariably by a setback. The beneficial effect of rest is indirect, inasmuch as it protects the inflamed nerve trunk from the innumerable small traumatisms active use of the limb would entail, traumatisms which aggravate the condition as indicated by the pain they create. Although rest is a *sine qua non* in the severe cases, rest alone will not cure this form of neuritis, owing, as stated above, to the very slight tendency toward spontaneous recovery of an inflamed nerve trunk. This failure to heal of its own accord is accounted for by the poor blood supply provided for the nutrition of the peripheral nerve trunks, and in general it may be said that the more poorly tissues

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are fed the more slowly do they throw off inflammatory or other diseased conditions. This is the point at which the second curative factor mentioned, heat comes into play. For many years I had heat applied in the shape of hot salt or sand bags placed along the course of the affected nerve, and the results obtained were not bad. Nowadays wherever we have the electric current at hand it is well to wrap electrically heated pads (so called thermopads) about the affected arm or leg and to keep these pads in place for a good part of the twenty-four hours. Hot poultices and other hot applications can be used for the same purpose. Far more effective than any of these methods of applying heat is the use of superheated air. Under the influence of Dr. Willy Meyer's teachings of Bier's methods of treatment of inflammatory conditions, I began using superheated air in the treatment of neuritis two years ago, and the results obtained have been so satisfactory that I thought it worth while to call your attention to this most efficient method of treating this trying class of cases. In neuritis the superheated air is applied best as a hot-air douche along the course of the affected nerve trunk. This method gives decidedly better results than the use of the hot-air boxes, so useful in joint cases. The application is made two or three times a day, or even oftener, according to the severity of the case. Each application should last from half to three-quarters of an hour. Briefly, it may be said that the douche should be applied as hot as the patient can bear it, care being taken, of course, not to burn the skin. After a few treatments, the tolerance increases greatly. The amount of heat can be controlled both by regulating the source of the heat and by holding the conducting tube more or less closely to, and moving it more or less rapidly or slowly, over the skin; the closer it is held and the longer the current of hot air strikes a given point of the skin the greater is the sensation of heat. At first I used an apparatus built along the lines of the one described in Dr. Meyer's "Bier's Hyperemic Treatment." The source of heat was either a special Bunsen burner for gas, or, where gas was not obtainable, a special alcohol lamp, both supplied by Kny Scherer. At present I use an electric hot-air douche, which is exceedingly handy and simple, and which at the same time gives off a much higher degree of heat than any other apparatus I have tried. The construction of this electric hot-air douche (made originally to dry hair quickly) is simplicity itself. It consists of a small electric motor, which drives a small fan; the latter forces a current of air over a coarse wire coil heated by the electric current. Within less than five minutes the air as it leaves the conducting tube shows a temperature of 200° F., this is hotter than any patient will stand applied closely to the skin.

These hot-air applications accomplisn two equally important objects: they alleviate the pains, which are the principal symptom of the disease, and at the same time they cure the disease itself. The cure is effected most likely by the production of an active hyperemia, not only in the skin to which the heat is applied, but also in the underlying tissues, including the affected nerve trunks. After an application the skin is very much reddened, and at the end of a week the area is browned as from sunburn.

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## REMOVAL OF RENAL CALCULUS.

Howard A. Kelly, in the *Journal A. M. A.*, describes his technique in removal of renal calculus. A renal catheter 1.75 mm. in diameter, large enough to obturate the ureteral orfice and prevent a reflux of fluid into the bladder, is inserted through an open air cystoscope and introduced well up to the kidney just before giving the anæsthesia. The patient is then put to sleep, preferably with nitrous oxide, semiprone, on an Ede-

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bohls cushion. An incision is made in the loin and the superior lumbar triangle is pulled open and the kidney exposed and freed on all sides from its fatty capsule. The stone is then felt and the kidney gently loosened as far as possible on all sides and brought toward the wound. Then an assistant forces fluid (1 to 1,200 silver nitrate) into the renal pelvis, until it puffs out tense.

As a rule, with a careful preliminary study, the exact capacity of the renal pelvis is already known. Then when the pelvis and kidney are swollen up tense, the surgeon first incises the capsule and then plunges a blunt pointed and blunt edged knife through the cortex on the posterior surface, easily entering the renal pelvis at once and enlarging the incision, in a transverse direction if the stones are small. There is a gush of fluid which stops as he introduces his finger and feels for and finds the stone, which he at once grasps with a small stone forceps and removes. The calices and the mouth of the ureter are now examined for more stones and the kidney is palpated on all sides with both hands, one finger being inside the renal pelvis. After all stones are removed, the wound is plugged or held closed, while the pelvis and the calices are again distended, with the silver solution, when the finger is suddenly withdrawn, letting the fluid escape with a rush, bringing any small calculous *debris* with it. This may be repeated several times. The points of advantage of the technique are: 1. It involves a minimal amount of damage to the kidney. 2. It is done through the part of the organ most easily accessible. 3. The distention is invaluable in offering a bag of fluid, overlaid with a zone of soft tissue, which is easily punctured. 4. An exploration is easily conducted through the opening revealing the presence or absence of other calculi. 5. If it is desirable to keep it open a while for drainage the transverse incision is a good one for this purpose, as it can be left open and will close rapidly when the irrigations are omitted. 6. In the last case in which operation was done, no sutures were put into the kidney, and yet there was no escape of urine after twenty-four hours and practically no bleeding through the incision.



## RECTAL HEMORRHAGES.

Martin L. Bodkin, in the *Medical Times,* admonishes that bleeding from the rectum is often the only symptom which prompts the patient to consult a physician. The diagnosis of hemorrhoids, as given by the patient, is accepted too generally as sufficient. Bleeding from the rectum is so commonly associated with hemorrhoids that one is apt to be careless and fail to make either an ocular or digital examination.

Why the average practitioner will permit his learning and judgment to be laid aside for the opinion of the layman in such instances is hard to understand. The gynæcologist never fails to be suspicious of malignancy during middle life, if irregular bleeding from the uterus is called to his attention. Blood may be found in the stool, when associated with severe catarrhal diseases of the colon or rectum, internal hemorrhoids, fissure in ano, polypi, ulcer of the rectum; with dysentery, prolapse, malignant and non-malignant growths, and erosions of the mucous membrane, due to stricture or impact feces.

Besides these, constitutional diseases such as typhoid fever, yellow fever and malaria may be associated with loss of blood from the rectum. Some cases of anæmia, purpura, scorbutus, kidney and heart diseases, where changes in the blood occur, will also present this symptom.

The origin and diagnosis of blood from the stomach or small intestine will not be included in this consideration of rectal bleeding, as it is beyond the scope of this paper further than to say that co-

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agulated blood from the upper portion of the alimentary canal would be incorporated with the digestive residue, while blood from the lower portion is often evacuated independent of the fecal mass in the form of a slight or severe hemorrhage.

Internal hemorrhoids when eroded are probably the most frequent source of bleeding and are responsible for most of the mistakes in diagnosis. Fissure in ano and ulcer are the next frequent and are quite common, but permit me to emphasize the fact that their presence does not conclusively exclude the possibility of the co-existence of rectal cancer.

Adenomata of the sigmoid and rectum are more frequent than is suspected, and in the early stages give the ordinary symptoms of rectal bleeding, but later present a picture of sepsis (septecemia) simulating that of cancer long before a malignant degeneration has occurred. These growths, when extensive, irritate the intestinal canal so greatly that a constant discharge of blood, fecal matter and broken down tissue takes place. These non-malignant growths are too often allowed to progress to malignancy.

Cancer is found more frequently in the rectum than in any other portion of the small or large intestine, and when we consider the advantages of early operation, it seems that more care should be exercised to recognize this one malady before involvement of the surrounding tissue and organs has taken place. Early operation is most promising in either an attempt at radical cure or the prolongation of the patient's life.

The symptoms of this disease are at first vague. The patient complains of fullness in the pelvis or bowel, due to pressure, according to the location of the growth. The pain in the early stages from carcinoma is very little excepting at the margin of the anus. When the growth is situated higher up the fullness of the rectum is complained of more than any other symptom and there is a constant desire to dislodge the mass. Stricture, hemorrhoids, fissures, or pruritis ani may be present at the same time. Blood as the result of the ulceration and inflammation is quite early in its manifestation.

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## TREATMENT OF FURUNCLES.

A writer in the *International Journal of Surgery* states that for many years he has been quite successful in the management of small furuncles with what might be termed the collodion treatment. This consists in covering the boil with thin layers of absorbent cotton, held in place with collodion (not flexible) and extending some distance beyond the inflamed area. The main objects of this procedure were to protect the furuncle from irritation by the clothing and to prevent the dissemination of bacteria into the deeper parts by friction. Under this method it was found that the infiltration would often be absorbed without the furuncle coming to a head, or that the pus formation would be small and localized.

Recently Dr. Fuchs in *Muench. med. Wochenschrift* has reported upon a method of treating furuncles, the aim of which is to limit the inflammation by encircling the inflamed area with a layer of collodion, without encroaching, however, upon the central zone. This application is renewed in the course of the day and extended somewhat beyond the margins of the inflammation. It is stated that the constant but gentle pressure causes the boil to point in one to three days and rapidly localizes the infective process.

Either of these methods is so simple and easily applied that they are well worthy of a trial in cases of ordinary furuncle.

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## GYNECOLOGICAL HINTS.

Ralph Waldo, in the *International Journal of Surgery*, gives the following:

The best time to draw the urine before an operation is after the woman

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has been placed under the anesthetic. The bladder is more apt to be thoroughly emptied and there is less liability of infection.

Before suggesting any form of treatment, especially operative, a thorough general examination should be made, for the gynecologist's advice will be much influenced by the condition of the heart, lungs, and kidneys.

The introuterine use of instruments, as sounds, curettes, dilators, etc., is a surgical procedure and should seldom, if ever, be indulged in outside of the operating room, and under no circumstances without thorough antisepsis. Formerly the uterine sound was a fertile source of infection of the uterine cavity, the Fallopian tubes and occasionally the peritoneum, not to mention the large number of abortions that were accidentally produced.

A fractured coccyx may produce many symptoms that may lead one to think he has for more stones and the kidney should be palpated on all sides with both hands, the finger being inside the renal pelvis. After all stones are removed, the wound is plugged or held closed, while the pelvis and the calices are again distended, with the silver solution, when the finger is suddenly withdrawn, letting the fluid escape with a rush, bringing any small calculous *debris* with it. This may be repeated several times. The points of advantage of the technique are: 1. It involves a minimal amount of damage to the kidney. 2. It is done through the part of the organ most easily accessible. 3. The distention is invaluable in offering a bag of fluid, overlaid with a zone of soft tissue, which is easily punctured. 4. An exploration is easily conducted through the opening revealing the presence or absence of other calculi. 5. If it is desirable to keep it open a while for drainage the transverse incision is a good one for this purpose, as it can be

## DANGERS OF "606."

Schamberg, in the *Journal A. M. A.*, discusses the causes of inflammation of cranial nerves after the use of salvarsan. The only disturbing results, Schamberg says, that have been reported after the use of salvarsan are occasional inflammations of cranial nerves, particularly of the optic and auditory nerves. Relative to the number of cases treated, however, such complications have been very small, though it is quite possible, as he states, that more of these may have occurred than have actually been recorded. Ehrlich denies any etiological relationship between the use of the drug and the development of the neuritis, regarding all such cases as fresh syphilitic neuritis; but others, Finger, for example, believed that though these complications are syphilitic, yet that they are related in some way or other to the administration of the salvarsan, perhaps because the drug seems to have a traumatic effect on the nerves. Schamberg believes that these inflammations have occurred exclusively after intramuscular life, if intracutaneous injections and not is called to intravenous administration. found in the stomach, however, occurred severe catarrhal disturbances venous route, though rectum, internal hemorrhoids proportion of these ano, polypi, ulcer of rectum, The only way that dysentery, prolapse, malignant growths, and will be able to be mucous membrane, due to constipation to reimpact feces.

Besides these, constitutional diseases, especially such as typhoid fever, yellow fever, malaria may be associated with blood from the rectum. Some other anæmia, purpura, scorbutus, kidney disease, leukemia, heart diseases, where changes in the blood occur, will also present this symptom.

The origin and diagnosis of bleeding from the stomach or small intestine will be considered in this paper further than to say that the truth should be included in this consideration of critical

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(1) That inflammation of the optic, auditory, facial, and other cranial nerves has developed in a minute percentage of cases after the use of salvarsan in syphilis.

(2) That the same complications may occur spontaneously or after the use of mercury.

(3) That whether the incidence of such neuritic complications is larger after salvarsan than after mercury is a mooted question, on which foreign specialists are not agreed.

(4) That these inflammations have occurred almost exclusively in cases of recent syphilis.

(5) That they appear to have occurred exclusively after intra-muscular and subcutaneous injections, and not after the intravenous administration.

(6) That optic and auditory neuritis have in many instances cleared up under a second dose of salvarsan or under mercury and the iodides.

(7) That most of the cases of neuritis have occurred two or three months after a single injection of salvarsan. A risk therefore is incurred in discontinuing antisyphilitic treatment for a long period in early syphilis, after a single injection of salvarsan, particularly when given subcutaneously or intramuscularly. It would be, of course, likewise dangerous to cease treatment after brief mercurial administration.

(8) That the intravenous method of treatment has many advantages over the treatment by other routes.

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## DIGESTION IN FEVER.

Nichols, in the *American Journal of the Medical Sciences*, remarks that the usual occurrence of anorexia in fever is commonly regarded as a reason for withholding food. It should be noted, however, that loss of appetite does not necessarily imply loss of digestive power. Experiments with absolutely unpalatable and untempting diets (such as ash-free diets) have shown that such food is digested as completely as ordinary appetizing food (Pavlov's teachings to the contrary notwithstanding).

The dry mouth and tongue in many febrile cases have naturally suggested a diminution or suppression of salivary secretion and digestion in fever.

Numerous investigations of gastric digestion during fever have been made.

Beaumont from his classical researches (1833) claimed that in the "febrile diathesis" very little or no gastric juice is secreted and digestion is much impaired; the conceptions of fever at that time, however, were very vague, and it would appear from his protocols that his subject did not at any time during the experiments suffer from real fever, but only from transient attacks of acute indigestion.

Investigations by modern methods (*i. e.*, the stomach tube) have shown that in the various fevers there is usually a diminution or total suppression of hydrochloric acid in the gastric juice, while the pepsin is apparently but little reduced. Gastric absorption has been found materially retarded in fevers, while von Noorden found the motor functions of the stomach little impaired.

Special studies of pancreatic and intestinal digestion in fever have naturally not been made, owing to the inaccessibility of these regions to investigation.

Inasmuch as the bulk of digestion is carried on by the pancreatic and intestinal secretions, concerning which we have no specific data, it is apparent that the observations at hand indicating some lowering of gastric secretion are not sufficient basis for any reliable judgment as to the total impairment of digestion in fever.

Fortunately we have at command a simple, accurate, and conclusive means of determining the exact degree of the total net digestion and absorption of the various foodstuffs in patients with fever —the same standard method by which the quantitative digestion of food in

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health is determined—a method available and easily applicable for any subject. This consists in making exact determinations of the food materials (protein, fat, carbohydrate) ingested during a certain period, and also of these same materials as discharged in the feces for the same period. The difference between the material ingested and that dejected necessarily represents the amount digested and absorbed. The estimation of protein is based on a determination of the total nitrogen (Kjeldahl method) in the food and feces, that of fat on the material extractible by ether. As a certain though indeterminate portion of the nitrogen and ether extract in the feces is derived from excretions into the alimentary canal, desquamated epithelium, bacteria, etc. (and not from the food), the digestion is always more complete than the figures indicate. The error thus introduced is of considerable magnitude with small diets, and should be discounted in interpreting such, but with ample diets is of smaller moment and does not vitiate the method for purposes of comparison.

In order to form an exact estimate of the degree of impairment of digestion during fever by this method, the author has collected all the reports of analyses of food and feces in febrile diseases which he could find published. These cover 155 cases (1386 days of observation in all) in which determinations of nitrogen (protein) in food and feces were made, and 31 cases (154 days of observation) in which fat determinations were made. These estimations were made by thirty-six different investigators for various purposes. Practically no determinations of carbohydrate were found, and consequently there are no data on which to base a specific judgment as to its digestibility: but carbohydrate is usually digested much more completely than protein or fat, and it is highly probable that in fever the falling off in its digestion is no greater (and is probably less) than that of protein or fat. While there is ample room for further investigation, the data thus collected are sufficient for the formation of at least a tentative estimate of the impairment of digestion and absorption of protein and fat during fever.

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## TECHNIQUE OF RECTAL EXAMINATION.

Adler, in the *Medical Council*, describes the method of making the examination as follows: The nail of the index finger being well trimmed, and the index finger lubricated with carbolized oil (5 per cent), which I prefer to vaseline or similar substances, is introduced into the bowel by a slow, boring motion, in a direction at first slightly forward, and then backward, into the ampulla of the rectum. This should be done gradually, so as to allow the sphincters time to relax; if attempted too hurriedly or in too forcible a manner, spasm of the muscles will be induced. As the finger enters the anus, the condition of the sphincters should be noted. The strength, measured by the power of resistance, will be found to vary greatly in different persons. In the aged or debilitated it is apt to be very weak, and just the reverse in the strong and healthy. In persons of especially nervous tendency and in cases of irritable ulcer (fissure) of the anus, a contraction may be met with, which, owing to the pain occasioned by an attempted examination, will render it impossible without recourse to an anesthetic (local or otherwise). As the finger passes beyond the margin of the external sphincter, it should be swept around the anal canal in order to determine, if possible, the existence of any ulceration or other abnormal condition. It is just between the internal and the external sphincter muscles that the orifice of most of the internal openings of fistulæ is found, and it is at this point that the presence of small foreign bodies may be detected, which have lodged in the crypts or in the mucous membrane.

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# THE DOCTOR HIMSELF.

## PLAY.

DOCTOR, can you play? Pertinently asks the *New England Medical Monthly.* When the children are engaged in any of their games, can you still join in? Can you forget for the time your responsibilities and dignity and just let yourself go? Can you catch a ball without hurting a finger? Can you throw a dozen without laming your shoulder or arm? Can you play a game of tennis with your boy or girl which will make him "sit up and take notice," or does he allow you "fifteen" or even "thirty?"

The last annual meeting of a certain District Medical Society was entertained not by after-dinner speakers, but by the presentation of a little sketch or farce. One of the well-known nerve clinics of the city under the charge of Dr. Neuron was pictured in dress, action and personnel. An irascible chief, a self-confident house officer, a pompous German specialist, an intoxicated baseball enthusiast, a scheming Hebrew, a neurasthenic woman, an attractive nurse—these and various other characters were shown or caricatured. The actors forgot themselves and the audience hugely enjoyed themselves. Could you do that?

Or are your muscles, except those of your legs, weak and flabby, is your lung expansion very small, are your joints and bursae stiff and irritable, is your mental view of things and people solely that of a man absorbed in his professional duties? Not that you are any more likely to sin in these respects than your neighbros of the same age, but neither are you any less likely to do so and you know better. You know some men who are still boys. Perhaps they irritate you by their attitude in regard to certain matters. But in respect of health are they not wiser than the "men of their own generation?" Think it over and act accordingly.

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## WORRY THAT KILLS.

What breaks the shaft of a great ocean liner, remarks *The Healthy Home,* is not the work it does in driving the ship forward through the sea, but the tremendous speed at which it is driven when the waves lift the stern into the air and it is doing no work whatever. It is so with the most perfect of all machines, the human body. It is not work that wears us out or suddenly snaps the cord, but rather it is the extra strain we put upon the machine by the waves of passion and folly that sweep over us.

Familiarity often prevents worry. Look at doctors. They are ever exposing themselves to dangers from infectious diseases, but they never think of worrying about them, not on account of any special courage, but simply because of familiarity. So with sailors aloft, workers in dangerous trades, people accustomed to the stress of poverty—these are constantly found happy and contented, and free from all worry.

Knowledge often dissipates worry. We often are needlessly anxious about things concerning which increased knowledge removes all such thoughts. If we know a thing is not dangerous, we cease to worry over it. If we know the thickness of the ice, we cease to be anxious if it will bear. If we know the firm is solvent, we don't worry over our investment. And so on.

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## MEDICINE AND QUACKERY IN ROME.

The *British Medical Journal* reminds us that in Rome, as in Greece, the prac-

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tice of medicine was unfettered by any regulations. Those who undertook to treat diseases got their knowledge when and where they liked. Pliny—who, however, had a strong bias against the profession—says that people believed in any one who gave himself out for a doctor, and seems to have looked upon them as chartered murderers. There was, he complained, no law by which doctors could be punished for ignorance, and no one took vengeance on a doctor if a patient died through his fault. They were allowed to learn their trade at the risk of the public and to make with impunity experiments which might cause death. According to Pliny, practitioners of medicine arrogated to themselves the privileges granted by the university in Moliére's play:

Virtutem et puissanciam
Medicandi
Purgandi
Seignandi
Percandi
Taillandi
Coupandi
Et occidendi
Impune per totam terram.

Pliny is wrong, however, in saying that the law could not touch a doctor whose want of skill caused the death of a patient. The Lex Cornelia (88 B. C.) made him liable to arrest if death was brought about by his fault. Under the Empire there were regular courses of instruction, and the future doctor was required to have learnt grammar, the history of literature, rhetoric, and mathematics before entering on the study of medicine. Then they attended lectures by the iatrosophists and received practical training from doctors in the public service, and what we should call general practitioners. By the side of what may be called the regular profession quackery flourished like a foul weed. Thessalus, a physician of the Methodist sect, undertook to fashion cooks, dyers, spinners, cobblers, and weavers into doctors in six months. Like Sangrado, he taught the whole art at once. Pupils of this stamp often could not write or even speak correctly; with the assurance natural to such persons they looked down on earnest students as fools who wasted their time on learning useless things. Why, indeed, should they scorn delights and live laborious days in study when we learn from Galen that it was not the most skillful doctor, but the one who could most adroitly flatter, who gained the favor of the public? To him, he says, everything is made easy; all doors stand open to him. He gains riches and power, and students crowd to him from all quarters. Galen in one place amiably compares the doctors in Rome to robbers, the only difference between them being that, while the robbers practiced their profession among the hills, the doctors practiced in the cities. Thessalus, who called himself the "Conqueror of Doctors," walked along the streets escorted by a crowd like that which followed a street performer or a celebrated circus rider. The eagerness to get practice induced many to recommend themselves to the favor of influential persons, to strut along the streets with them, to give banquets, and to make buffoons of themselves, while others, by the splendor of their dress, by costly rings, and other ornaments, sought to attract attention. We fear it must be confessed that men, even in these days, have been known systematically to play the part of Amphytrion to people of influence and to have their attendancce on the great announced in the press.

That the great Galen himself was not altogether free from the faults which he condemns in others may be gathered from the fact that he was nicknamed by his professional brethren, "The Worker of False Miracles." He was a master of what may be called "clinical diplomacy," and gulled people as cleverly as the subtlest practitioners of the art in later days. He bragged about the purity

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of his drugs and of the scrupulous care with which he compounded his medicines.

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## THE MEDICINE OF HIPPOCRATES.

Bernard Smith, in the *California Medical and Surgical Reporter,* points out that previous to the time of Hippocrates, medicine had been closely associated with religious rites and superstitions. During this period medicine was put on a sane basis through the advocacy of natural causes for diseases and of treatment along rational lines, avoiding the supernatural and superstitious. He advocated that accurate observation should be the foundation of all medical knowledge and believed that the chief art of medicine consists in the restoration of the body to the influence of the operations of nature and in managing them. "Our natures are the physicians of our diseases" and also "The art of medicine consists in the restoration of that harmony in the condition of health the derangement of which constitutes the essence of the disease."

The works of Hippocrates, which practically all authorities credit to him are: "The Prognostics," "The Aphorisms," "The Epidemics," "On Regimen in Acute Diseases," "On Airs, Waters and Places," "On the Articulations," "On Fractures," and "The Mochlic," a work on instruments of reduction. The most philosophical and that which shows the most extended observation, travel and study, is "On Airs, Waters and Places." In it he inquires into the effects of the seasons, winds, various kinds of waters, localities, the nature of soils, modes of life and exercises. The influence of each of these on health and the necessity of the physician making himself acquainted with all these matters. He points out the influences of climates and the diseases depending on differences in them.

To his writings may be traced the classification of diseases into internal, or medical, and external or surgical. Also for the classification of sporadic, epidemic and endemic forms and for the division of diseases into acute and chronic. As to the causes of diseases, these are divided into two classes:—

1st. Influence of seasons, climates, water situation, etc., and

2nd. Personal causes as food, immediate environment, habitation and habits of patient. He believed all disease was caused by an excess of one of four elements: heat, cold, dryness and moisture, and that this excess brought about changes in one or more of the four fluids of the body: blood, phlegm, yellow bile and black bile, which were the primary seats of disease. His treatment, aiming at the restoration of the healthy balance between these four fluids, is theoretically spoken of as crudity, coction and crisis—crudity, as the degeneration of the fluid which is in excess and causing symptoms; coction, the preparation for the evacuation of the fluid in excess by bowel, mouth, kidneys or skin; and crisis, the final evacuation, which restores the health by re-establishing the normal balance.

Hippocrates' knowledge of human anatomy was very crude and could not advance because of the deep religious respect for the dead then held throughout Greece, which prevented the study and dissection of the human body. He did make some study of anatomy by dissecting animals, but still we find his idea of veins and arteries was confused and that he considered nerves, tendons, ligaments and membranes as analogous or interchangeable tissues. He states that the ear is only to transmit sound to the brain where it is interpreted, and in another place describes the brain as a gland. Some idea of osteology existed but knowledge of the structure of the body was superficial and erroneous. Consequently it is not to be wondered at that the statements in the writings pertaining to physiology and pathology are very crude and incorrect.

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### THE MYSTERY OF DEATH.

Holbrook Jackson, in a review of a recent book entitled *Death, Its Cause, and Phenomena,"* says: Death is one of those things which most people prefer not to discuss; in polite company it is actually taboo, like politics and religion; no really nice person would allude to so unpleasant a theme. Yet it is a subject which has had devotees, and there is a period, during adolescence, when it has a morbid attraction for young men and maidens, as anyone can see who is at all acquainted with minor poetry. The major poets have also been moved to song by the tragedy and mystery of death. Edgar Poe even went so far as to say that death was not only the basis of his aesthetic, which is quite obvious, but that melancholy culminating, say, in the death of a beautiful, beloved woman, was the acme of all beauty; whilst Walt Whitman broke bounds, as he did on so many occasions, by acclaiming, in perhaps the most beautiful of his poems, the wisdom, joy, and facination of death. Generally, however, our poets have only been half in love with death; they have, in Keats' words, "called him soft names in many a mused rhyme," and let it end there.

For myself, however, I am inclined more to the authors' view that the final explanation of death can only come out of a much deeper knowledge of life. For, after all, what do we really know of life? Precious little at best, and what we do know is all prejudiced in favor of the human being. Even the present volume discusses death as if death were entirely a human affair. Most certainly are we concerned with the subject as it affects ourselves, but we must not overlook the fact that organisms, quite as mysterious and complex as man, are being created and destroyed more numerously and more rapidly than we are. We do not know anything about the supernormal lives of these things. To us the bulk of them is small and insignificent, but the fact is that they, as we, are born and die, and, so far as we can see, for no other reason than to be born and to die. Drs. Carrington and Meader speak of "the laws of Nature," but what do we know of these laws? Prolongation of individual life may not be a part of the scheme. We are pleased to take for granted the speedy deaths of millions of smaller organisms; indeed, we devote a great part of our energy to destroying the lives of courtless living creatures, from disease germs to barbarians, convinced that by so doing we are prolonging our own lives. It may be that in killing us off, Nature is up to the same game for a purpose in which man's will has no place. Anyhow, from the human point of view one desires to live as long and as often as possible.

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### INDEPENDENCE.

J. D. Albright, in the *Physicians' Drug News,* quotes that unique, original and delightful character, Bill Nye, that in order to become great one should exercise great care in the selection of one's parents. The truth of this assertion cannot be successfully assailed. Remove from our greatest statesmen; our most distinguished diplomats and strategists our most illustrious poets and celebrated musicians; our most talented and eminent physicians, or even from you and me, the influence of heredity, the effects of environment and the privileges afforded by opportunity, and all of us, from statesmen down, would not even be sounding brass, much less a tinkling cymbal.

Even though Napoleon is reported to have said when others claimed their ability to do what he had done, had they but had the opportunity, "I make my opportunities," two things must be borne in mind; there is but one Napoleon to two or three centuries, and that when the end came, when he died in exile and dishonor, the one time of his life when he longed for an opportun-

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ity, he was utterly unable to make one.

The idea that we are independent of others, that we have been the architects of our own structure, that we can and do do as we like regardless of what others may think of us, is so general that it is worth investigating.

Many men who imagine they are able to conduct their own business without outside influence are daily giving evidence of the most servile submission to the whims and opinions of their fellow beings. Men who are masters in the world of finance; men who with one stroke of the pen could bring thousands to their feet, have not the courage to do what they know is right and just, for fear of the comments that would be made regarding them.

Men who are financially independent and who wield no small influence in the affairs of state and nation are abject slaves to fashion, society, tobacco and whiskey. They wear collars an inch higher than the lengths of their necks; they patronize society functions and operas that they neither enjoy nor understand; they will smoke a number of cigars after they know they have enough because a friend insists, and they will not refuse a dozen drinks, for fear of being termed "unsociable." Thus the most "independent" of self-made men practice hundreds of hypocrisies, cater to the ever-changing and never-satisfied whims of public opinion, yet congratulate themselves on their utter disconnection with dependence of any sort. Their speech, their actions, their habits, their meals and their homes are regulated absolutely by what their neighbors and associates do, and but few of them have the moral courage to do what they know is right, or what they would do of they were free from the influence of being observed by others.

## A DAY'S TRAFFIC ON FLEET STREET, LONDON.

It has been customary for a number of years to take a census of the traffic for a single day upon some principal London thoroughfares. The same day of the month has been selected as nearly as possible from year to year, so that the enumeration might be made under approximately similiar conditions.

One street chosen for the census is Fleet Street, a very important thoroughfare extending from one end of the Strand to Ludgate Circus. It is a convenient and direct route to the city proper, and is traversed by several lines of omnibuses. The striking feature of the census on Fleet Street (and this would be true in a greater or lesser measure of all the other London streets) during the past five years has been the rapid displacement of horse-drawn vehicles.

The traffic on Fleet Street was taken for 12 hours, from 8 a. m. to 8 p. m., on April 19, 1911, and compared to the same period and day in 1907. On April 23, 1907, 4,143 horse cabs and omnibuses passed along Fleet Street and only 1,043 motor cabs and motor omnibuses, while on April 19, 1911, there were 4,300 motor cabs and omnibuses against 486 horse cabs and omnibuses. On the day that the census was taken this year a strike was threatened by the taxicab drivers, so that the number of hansoms in use was in all probability much in excess of the daily average.

On the 1907 census day there were only 48 taxicabs, against 1,902 horse cabs, but on April 19, 1911, the number of horse cabs was reduced to 391 and the number of taxicabs increased to 1,616.

The 62 motor vans passing on Fleet Street on April 19, 1911, was an increase of 106.66 per cent over the number in use on the corresponding day in 1909 and nearly 38 per cent over the number on the April day selected for 1910.

The total motor traffic on Fleet Street more than quadrupled in the four years. On the April day in 1907, 1,126 vehicles passed; in 1908, 2,073; in 1909, 2,392; in 1910, 3,884; and in 1911, 4,481.

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# THE SICK ROOM.

## HUMAN MILK.

THE *Charlotte Medical Journal* thinks few practitioners realize the great value of human milk for babies or at least if they do so theoretically, that the practice of many does not uphold such belief.

To nurse a child at the breast is such an old-fashioned and commonplace habit and the patent baby food is so convenient and well advertised, that when the mother's milk shows signs of being inadequate, it is so easy for the doctor to say, "Wean the baby and put him on So and So's food," and then think that he, as the physician, is relieved from responsibility.

By so doing he has robbed the babe of his birthright, without an effort to remedy natural conditions. He has taken away a vitalizing and life-giving food for which no substitute of equal value can be found. We all must know that there are certain antitoxic and immunizing qualities in mother's milk which make the child stronger and more resistent to disease and which are contained in no other food.

For that reason even small amounts of milk are better than none. If the mother can nurse the baby only once or twice a day by all means use what is available and do not cut the child off entirely.

But, with encouragement and kindly advice from the physicians many more mothers than at present, could conserve, increase or enrich their breast milk and thus many more babies' lives be saved. For it is the artificially or bottle-fed babies from which the high infant mortality comes and not from the breast-fed ones. In order to have the mother's milk adequate, the physician must keep this object in mind during pregnancy and during confinement, and especially during the months succeeding the birth of the child.

It is needless to go into all causes of breast milk failure, but the principal ones are anagmia, worry and physical fatigue from overwork or loss of sleep. These are conditions which usually can be overcome or prevented.

Then the diet of the mother can be changed if necessary to make her a better milk producer, but do not give her beer or alcoholics for such purpose.

To those who have never tried it, a good sized bowl of cornmeal or oatmeal gruel given to the mother twice daily will work wonders with the milk supply.

But, someone says, what about those cases where the mother's milk does not seem to agree with the baby? These cases also are more apparent than real, and can be overcome by careful management. Usually the baby is nursed too often, or the mother's milk is too rich in cream and can be diluted by giving the child a small amount of water or barley water, before each nursing or the child is constipated or there is a lack of outdoor exercise and air for babe or mother or there are other faults that can be corrected.

In any case we should not give up nursing the baby until we have made even more of an effort to keep him at the breast than we would make to keep him on the bottle.

And when the mother's' milk really does begin to fail and it is insufficient to make the child gain in weight properly, it is much the better plan to substitute one or two bottles of diluted cow's milk for the same number of breast feedings and keep the child at the breast the rest

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of the twenty-four hours and not wean it entirely.

In other words, until the child is six or eight months old use what breast milk is available and do not destroy or take away Nature's own source of food supply without an intelligent and persistent effort to remedy conditions.

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## CONSTIPATION IN NURSING CHILDREN.

Dewees, in the *California Eclectic Medical Journal*, remarks that constipation in nursing children is a source of annoyance that is constantly brought to the notice of the physician. It occurs in the bottle-fed as well as in the child that nurses its mother's milk, and if not remedied, may result in piles.

The cause of this condition is usually that the food contains too much casein, and calls for a modification of diet.

If the child is bottle-fed and ordinary cow's milk is used, a little boiled water, cream enough to bring it up to the required richness in fat, and a little sugar added, will be all that is needed in many cases.

If the child nurses the breast, the mother is instructed to change her diet. She may eat lettuce, spinach, green beans, beets, turnips, tomatoes and fruits. Some will profit by such instructions, but the chances are that they will send to the drug store for castoria or other patented stuff. They want immediate relief, and it is not an easy matter to pour a teaspoonful of castor oil down the throat of a squirming, resisting youngster. The writer speaks from experience. It is astonishing the amount of money that is spent at the drug store for this condition alone, and the physician is largely to blame.

In the treatment of these cases, after giving proper instruction as to the change in diet, the writer prescribes a three or four-ounce bottle of Elixir Podophyllum, with directions to give one-fourth to one-third of a teaspoonful every 6 to 8 hours till the bowels move, then less often, as the case requires. This medicine is safe for any age, pleasant in action, and the most efficient in overcoming this condition of any remedy we have.

When people get acquainted with the Elixir Podophyllum and its uses, fewer trips to the drug store will result, and less medicine of any kind will be required.

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## TREATMENT OF RINGWORM.

The *British Medical Journal* thinks the several antiseptics advocated for outward application in cases of ringworm are far from satisfactory, the prolonged duration of the disease proving their inefficiency. In dealing with the numerous cases of pediculosis in fever wards, E. Lynn Jenkins reports that he and his associates always employ the essential oil of sassafras, which, without exception they find acts as a specific in such cases.

When both pediculosis and ringworm occurred in the same scalp, it was noticed that the latter disease also reacted favorably to this preparation.

This led them to test the possible usefulness of the oil for ordinary cases of ringworm and so far the results have been most happy. The hair is cut closely around, in order to identify the patches, the application of the oil being made twice a day by means of a camel-hair brush. This is continued for a few weeks, as the case indicates. No irritation is produced, while the preparation is most pleasant to use. Not only is the spread of the infection prevented, but that the fungus is being destroyed with certainty is recognized in two or three weeks by commencing development of fine hairs.

In country practice, where treatment by X-rays is impracticable, this method will prove a valuable addition to the several means recommended by various authorities.

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### MEASLES.

In view of the prevalence of measles the *Nursery Times* thinks it may be useful to recall a few points relating to the illness.

*Symptoms.*—Like those of a cold, eyes watering, sneezing, etc., feverishness and cough. Rash appears on fourth day.

*Infection.*—The disease is infectious for a fortnight, and may be carried by the breath and the discharges from nose, mouth and eyes.

*Nursing.*—An essential point is diet; it should be nourishing, but chiefly liquid. Milk should be given, modified in cases of diarrhœa by lime water; whey and weak chicken broth may be given—also plenty of water. In convalescence, eggs, cereals, milk puddings, fish, stewed fruit, jellies, and bread and butter. Avoid strong meat or vegetable soups, vegetables or fresh fruit.

The patient should have plenty of fresh air, but great care must be taken to avoid draughts or any sort of chill. In complications such as pneumonia, bronchitis, inflammation of the eyes, special diet and nursing care is necessary.

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### ICE BAGS.

Emily Bleazley, in the *British Journal of Nursing*, advises that ice bags should be about half filled with ice, which has been broken up into small pieces so as to equalize the weight, and to fill it in through the neck of the bag. Except when applied to an unshaven head one should never be directly applied to the patient, but should have a fold of lint between. The full weight of the bag should not be allowed to rest on the patient, but it should be hung from a pulley or cradle, or some arrangement devised to lift it so that it just rests on the part.

As soon as the ice melts the bag should be emptied and refilled, or taken off altogether. Keep the part under the bag as dry as possible.

### THE COLD ENEMA.

The cold enema is extolled by *Pediatrics* as a very valuable means of reducing the temperature in fevers of children, and in typhoid fever it is an excellent means of stimulating the liver and kidneys, besides cleaning out the colon. The water is introduced through the rectal tube and should be injected slowly, the reservoir being about one foot above the patient's pelvis; it should be retained 10 to 20 minutes and then slowly let out through the tube and another quantity of cold water run in. This procedure is repeated two or three times without withdrawing the tube. It is well in some cases to begin the treatment with the first pint of the enema at 90° F. and then steadily but rapidly reduce the temperature of the rest to 70° F. This helps the bowel to tolerate the enema and prevents its premature expulsion.

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### A SIMPLE MEANS OF REMOVING PLASTER OF PARIS.

In spite of the use of special instruments, the removal of apparatus containing plaster-of-Paris is often troublesome, and in the case of a recent fracture may cause injury. Methods of softening the plaster by water, either alone or with the addition of salt, are rarely successful, as the apparatus becomes coated with a layer of grease which prevents their action. Stransky reports, in *Semaine Medicals*, he has obtained satisfactory results by moistening the line of section with vinegar applied on a tampon of wool. After a minute the plaster will be found completely softened so that it may be easily divided with a pocket knife or ordinary scissors —a procedure easy for the surgeon and painless for the patient. By this method a plaster case for a fracture of the femur, consisting of 80 turns of bandage, may be removed in about a minute and a half.

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### THE MAN WHO WOULD "RETIRE."

It is almost suicide for a man who has been in active business all his life to retire unless he has some other occupation which will engross his time and attention says the *Healthy Home*.

The ideal place in which to grow old is on a farm where an aged man may still occupy himself in moderate manual work, to which he has been accustomed, whenever he feels like it, and may have the interests of growing life around him.

The "Farm Journal" has this advice, especially for the farmer himself, who is so apt to wish to move to a city or town in his old age:

If you are thinking of retiring from active work on a farm, build a little house somewhere near the old home and let one of the boys live there. Turn the farm over to his management and take a part of the crops for rent.

By this plan you can often help the boy out with light jobs, and in financial difficulties; and if there is anything you wish done about the homestead that is above your strength to do, he will be ready and handy to respond to your call for assistance. Such co-operation will prove a great convenience, and add materially to the yearly profits of you both.

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### PLANTS IN THE SICK ROOM.

Dawbarn, in the *Medical Record*, explains the unwisdom of keeping flowers or plants in a sick room at night. Flowers possess three prominent functions in so far as they affect the air about them. First there is transpiration; they give up moisture taken from the soil, wherefore the air becomes humid if many (especially growing) plants are kept in the room. Second there is respiration; plants here act much as do human beings, using up oxygen and throwing off carbonic acid. Third there is photosynthesis, the name given to the and all green parts chiefly; it is the reverse of the result of respiratory activity, as just stated. So long as there is daylight, carbon dioxide is taken in and oxygen given off by photosynthesis. Consequently until nightfall functions two and three about balance one another, leaving neither good nor bad results. But during the entire night functions one and two continue their activity, whilst function three is suspended. Function one is not objectionable; but two, without three to balance it, acts (in principle but not in amount) until the return of daylight, just like an additional person breathing in the room, thus leaving a little less oxygen for the use of the invalid. The standing order should therefore be to remove all plants or flowers at night; it is based upon the sound facts of plant psychology.

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### AN IMPORTANT FACT ABOUT RICE.

People in temperate climates have not been in the habit of depending upon rice as an important article of food, yet more than half of the human race make it a large factor in the daily diet.

These people maintain health and vigor on rice, but they use unpolished rice. Something seems to be removed from the grain in polishing which interferes with its nutritive value.

A remarkable illustration of this has just come to light in one of the hospitals in the Philippine Islands. Within a few months the use of polished rice has been discontinued and the use of unpolished rice has been begun. As the apparent result, all cases of beriberi have disappeared from the hospital although the disease had been continuously present for five years preceding.

The unpolished rice was hard to get, the local mills not being equipped to furnish it, but the officials persisted in demanding it and now a number of mills in the Philippines are turning it out.

One of the causes of the difficulty lies in the fact that rice hulls which adhere to the small grains of rice are removed in the polishing process. If the rice is unpolished it is apt to contain these small

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grains with the hulls thereon. The annoyance thus caused is nothing, however, compared with the increased value of rice as a food.

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### CURIOSITIES ABOUT ORANGES.

*The National Druggist* states that the name "orange" is from the Latin *aurum*, meaning gold or of a golden color. The fruit was originally a small bitter berry, about the size of a common early Richmond cherry, and very seedy. It has been cultivated in Hindostan from a very remote period, and was taken from that country to Arabia and Persia in the eighth or ninth century. It is said to have received little or no attention from cultivators of fruits in either of the last-mentioned countries prior to the beginning of the tenth century, there being a tradition that it was a "cursed" fruit sent by Mohammed to destroy the unfaithful. This reminds us that our common tomato was formerly supposed to be poisonous, it being now less than seventy years since it was only grown as a garden curiosity. But to the orange. In the tenth and eleventh centuries the horticulturists of Oman and Syria began the cultivation of the tree in earnest, the fruit going under the name of "bigarade." By the end of the twelfth century it had reached the Levant, the soldiers of the cross (Crusaders) bringing it with them in their return from Jerusalem. It was well known but not extensively cultivated in either Italy, Spain or France before the middle of the sixteenth century, four hundred years after its introduction into the first named country, the hindrance being a survival and an addition to the old anti-Mohammedan tradition, viz., that the use of the fruit would cause the partaker to enroll himself with the legions of Islam whether he desired to or not.

The Spaniards finally attempted and succeeded in cultivating it in their West Indian colonies, and from there it found its way into Florida, Central America, Mexico and California, always improving in size and flavor until it became what it is today, one of the most perfect of fruits.

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### NOT ALL ERRORS.

Schoolboy errors in examination are seldom open to the charge of commonplaceness. Here are a few good ones from England, but we are not so sure they are all errors.

Lord Raleigh was the first man to see the Invisible Armada.

Shakespeare founded "As You Like It" on a book previously written by Sir Oliver Lodge.

Tennyson wrote "In Memorandum."

King Edward IV had no claim by geological right to the English throne.

George Eliot left a wife and children to mourn his genii.

Henry I died of eating palfreys.

Louis XVI was gelatined during the French Revolution.

The Rhine is bordered by wooden mountains.

An angle is a triangle with only two sides.

Algebraical symbols are used when you don't know what you are talking about.

Geometry teaches us how to bisex angels.

Parallel lines are the same distance all the way, and do not meet unless you bend them.

The whale is an amphibious animal, because it lives on land and dies in the water.

A parallelogram is a figure made of four parallel straight lines.

Horse-power is the distance one horse can carry a pound of water in an hour.

The press to-day is the mouth-organ of the people.

A vacuum is a large empty space where the Pope lives.

Martin Harvey invented the circulation of the blood.

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# MEDICAL PHARMACY.

## IMPROVED FORMULA FOR INFUSION OF DIGITALIS.

P. E. HOMMELL, in *Merck's Archives,* refers to the suggestion from different sources of late to delete from the U. S. P. the once popular tonic and sedative Infusum Pruni Virginiana, also the old fluid purgative Infusum Sennae Compositum, which they well deserve, being infrequently prescribed, other and more efficient as well as palatable preparations being exhibited in their place. There will remain, no doubt, in the next U. S. P. but one of what there was once quite a list in the years gone by—Infusum Digitalis—a most popular way of exhibiting this valuable drug to obtain definite cardiac and renal effect in dropsies generally.

Considering that this infusion is destined for still greater utility in the field of modern therapeutics, it seems very important to inquire whether at this time of U. S. P. revision it could be improved in any way. Investigation shows that so far as the process of production is concerned there is none, but from a point of palatability the writer believes there is.

A drawback of the administration of this infusion is that patients often complain of its taste, and also of decided stomach derangement after taking it for a while.

The cinnamon water in the formula is intended to render it more palatable and by its aromaticity to make it more acceptable to the stomach; to some extent it does this, but why not increase the amount of cinnamon water in the formula and add something which will inhance palatability and increase its solubility and absorption and render it more acceptable to the stomach? This can be accomplished by the addition of a small percentage of glycerin.

The writer has found that a fine aromatic flavor can be contributed to this valuable infusion by employing an aromatic water containing the oils of cinnamon, nutmeg, coriander and caraway; this combination is superior to cinnamon water, as it imparts a blended aroma instead of a distinctive taste not always desirable. There can be no doubt whatever of improving the taste and effect of this highly esteemed infusion by adding a small amount of glycerin and increasing the amount of aromatic water. I herewith give the formula of an improved infusion:

**Infusion Digitalis Improved.**

| | |
|---|---|
| Digitalis leaves, bruised | 15 gm. |
| Alcohol | 100 Cc. |
| Glycerin | 50 Cc. |
| Boiling water | 500 Cc. |
| Aromatic water, sufficient to make | 1000 Cc. |

**Aromatic Water.**

| | |
|---|---|
| Oil Cinnamon | 50 Cc. |
| Oil Nutmeg | 50 Cc. |
| Oil Coriander | 50 Cc. |
| Oil Caraway | 50 Cc. |
| Purified Talc | 15 gm. |
| Distilled Water, sufficient to make | 1000 Cc. |

## DO YOU KNOW HOW TO REMOVE A STOPPER?

Reagent bottles holding caustic alkalies, alkaline carbonate, etc., very frequently become fixed, and the usual method has been to tap the stopper with a wooden block, or the application of heat to the neck, or a combination of both. Results are poor in certain cases and often result in the fracture of the neck. The inverse process may be used to advantage. In other words, freeze the stopper, thus causing a contraction of the stopper from the neck. The bottle held sodium carbonate, that had formed sodium silicate, an excellent cement, and so were firmly fixed. They were inverted in a mixture of crushed ice and calcium chloride, taking care

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that the freezing solution did not touch the lips of the bottles. After standing twenty minutes, each stopper was removed without the slightest exertion. This is the neatest and safest way to remove stoppers from bromide bottles and other corrosive chemicals.

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### DRUGGISTS' CODE OF ETHICS.

The *Physicians' Drug News* opines that if druggists would adopt the code of ethics suggested by J. Leon Lascoff, (*Pharm. Era*) they would certainly promote more friendly feeling than now exists between physicians and druggists. Incidentally many physicians would profit by adopting the code.

1—Always show a friendly and professional spirit to all physicians with whom you come in contact.

2—Always treat your competitor fairly and squarely.

3—Never criticise a prescription to the patient.

4—Never discuss with your customers the relative merits of a physician as shown by his prescription, even when they ask you to do so.

5—Never make a diagnosis—always leave that to one who should know—the doctor.

6—Never practice substitution.

7—Never practice medicine or surgery.

8—Never practice gossip.

9—Never practice knocking your competitor.

10—Never practice emmenlogy.

a—Never have any kind of window display other than that which relates to your own profession. Do not specialize with patent or unethical nostrums.

b—Use neat bottles, boxes, and labels. Make neat packages.

c—Write labels distinctly and in full as per signature. Do not abbreviate.

d—Make notes of the size and weight of masses in pills and capsules on prescriptions, so that if repeated they will correspond with those originally dispensed.

e—Always keep the latest ethical remedies in stock and request the manufacturer to send notices to doctors informing them of this fact. This is good advertising and is strictly ethical; at the same time it shows you are abreast of scientific advancement.

f—Buy only the best drugs and chemicals from reputable houses and the physicians will obtain the desired result. Any preparation you manufacture should always comply with the standard of the U. S. P. and N. F.

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### INCOMPATIBILITY OF MERCURIC CHLORIDE AND BORAX.

Helsmoortel (*Pharm. Zeutralh.*) states that he recently had occasion to prepare a prescription calling for 4 grams of resorcin, a fourth of a grain of mercuric chloride, 2 grains of borax and 300 grams of distilled water. Upon attempting to dissolve the mercuric chloride and the borax a precipitate of mercuric oxychloride was obtained in consequence of the alkalinity of the borax, and this precipitate did not redissolve upon the addition of the resorcin. When, however, the resorcin and borax were dissolved together and added to the solution of the mercuric chloride, a clear mixture resulted, which deposited but a slight precipitate after two days. The author suggests that borax and mercuric chloride should not be prescribed together.

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### TO OBTAIN SMOOTH OINTMENTS OF SOLID SUBSTANCES.

To make perfectly smooth ointments containing solid substances in powder form, L. Willen (*Südd. Apoth. Ztg.*), recommends the following procedure: Rub up the powder with a small quantity of the same ointment base, and, while still warm, press through the finest silk sieve obtainable. Return the residue to the mortar and repeat the rubbing with a fresh portion of the base

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and strain as before. By continuing the operation an ointment is finally obtained which in point of smoothness and uniformity is superior to any that can be obtained by mixing in an ointment mill. The author suggests that when certain solids like the oxide of mercury, sulphur, ammoniated mercury, zinc oxide and others are prescribed the freshly precipitated substances should be used.

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### GRIT SOAP FOR SURGEONS' USE.

John K. Thum, Pharmacist at the German Hospital of Philadelphia, proposes a formula for a pumice soap, a variety which is preferred by some surgeons to the ordinary hard, soft or liquid soaps. This formula, contributed by the author to the *American Journal of Pharmacy*, is as follows:

| | |
|---|---|
| Cottonseed Oil | 500 c. c. |
| Stearic Acid | 500 grams. |
| Sodium Hydroxide | 150 grams. |
| Alcohol | 150 c. c. |
| Powdered Pumice | 300 grams. |
| Solution of sodium chloride (20%) | |
| Distilled water, of each, a sufficient quantity. | |

Heat the cottonseed oil and stearic acid until the acid is completely dissolved. Then add the sodium hydroxide, dissolve in a litre of distilled water, and heat for 15 minutes with constant stirring. Next add the alcohol and stir until saponification is effected. This is noticed by the mixture becoming homogeneous in a few minutes. Then add one litre of a 20 per cent solution of sodium chloride and stir vigorously. Allow to stand until the soap is hardened; the alkaline liquid, which remains at the bottom of the container, is then drained out by punching a hole in the soapy mass on one side. It is then washed two or three times with distilled water, melted, and while still on the fire, the powdered pumice is added, and the whole thoroughly incorporated. While still hot it is poured into suitable moulds. In twenty-four hours the soap is sufficiently hard for use.

### PHYSICAL CHEMISTRY AND IMMUNITY.

Professor Dante Arrhenins, in a lecture before the Royal Institution, said that the first systematic investigations in the field of antigenes and antibodies, said the lecturer, were due to Behring and Kitasato in 1890, so that the doctrine is of very recent date. After explaining that by the injection of different substances or organic origin into the veins of an animal, it was generally possible to obtain from the blood of that animal a serum which neutralizes the action of the injected substance, and which was called an "antigene," while the active neutralizing body in the blood-serum was called an "antibody," Professor Arrhenius went on to explain the nature of these substances.

The antibodies possess, for a great part, the property of causing hæmolysis; they are called "hæmolysins," and are obtained by the injection of red blood corpuscles into the veins of animals. The red corpuscles of the same kind as the injected ones, under the influence of these antibodies, give up their red coloring matter, the hæmoglobin, to the surrounding fluid, coloring it red, and the strength of the color can be measured colorimetrically, so that quantitative results are easily obtained. Other antibodies obtained in similar manner are agglutinins, bacteriolysins, precipitins, etc. Many of these substances are destroyed at temperatures over 50° C., and in the case of the bacterial poison, tetanolysin, for example, it was shown that the rate of destruction could be reduced to a very simple law, and that the influence of temperature might be useful for the animal body, which generally reacts against these poisons by an increased temperature as, for instance, in fever.

The lecturer went on to speak of the velocity of reaction in the action of antigenes on other substances, showing that many of the reactions are of such a

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nature that only a certain phase of the process may accurately be determined, as, in the case of the coagulation of milk by rennet, when the moment the milk contained in a test tube does not change its surface at a slight inclination of the tube can be determined fairly accurately. But no suitable method has been found to determine the times corresponding to the higher degrees of rigidity. In processes of this kind or in the case of coagulation of the blood-plasma, the presence of certain salts, in most cases salts of calcium (salts of barium or strontium act in a similar manner), play an important part, and it has been found for the coagulation of milk that the necessary time is inversely proportional to the concentration of calcium-ions in the solution.

Speaking of the partition of hæmolysing or agglutinating substances between cells and the surrounding medium, the lecturer said that the strong absorption of the blood poisons in the blood corpuscles indicates that they probably are chemically bound to some substances in the cells, and the absorption proceeds in accordance with common physiocochemical laws. Regarding the action of antitoxins on toxins, which was referred to as the central problem in immunochemistry, it has been found that if a certain addition of diphtheria antitoxin neutralizes 50 per cent of a given diphtheria poison, then double the quantity is not able to neutralize the poison totally, and even an addition of three or four times the quantity does not make the poison innocuous.

This behavior agrees wholly with the phenomena observed on the neutralization of a weak acid, such as boric acid, with a weak base, such as ammonia. The poisons are taken up very rapidly by the red blood corpuscles, or bacilli, into their interior. There they react rather slowly with the albuminous substances, and thus cause the effects of hæmolysis, bacteriolysis, or agglutination (probably only a special case of coagulation). Therefore, the equilibria between toxins and antitoxins find place chiefly in the interior of the cells, and not in the surrounding fluid. The protecting influence of sera and other albuminous substances probably depends on their entering into combinations with the toxins, and thereby hindering them from diffusing into the cells. Many of the difficulties in explaining the effects of toxins and antitoxins were due to the circumstance that it was generally supposed that they reacted outside the cells.



**CLINICAL EXPERIENCE IS ALWAYS A DEPENDABLE GUIDE.**

Countless physicians the country over have proven to their entire satisfaction that Gray's Glycerine Tonic Comp. fills an indispensable place in the treatment of all diseases in which lessened vitality is a prominent feature. It represents one of the notable advances in modern pharmacy, and many a practitioner has learned to rely upon it as his most valuable aid in increasing functional activity. Gray's Glycerine Tonic Comp. exerts an especially beneficial influence on the gastric and intestinal glands, thus stimulating the appetite, improving digestion and promoting assimilation. In all conditions of mental and physical exhaustion accompanied by malnutrition its effects are speedily manifested by an increase in functional vigor and a general improvement in the health of the whole body. Physicians who are not using Gray's Glycerine Tonic Comp. in their cases of general debility are urged to do so and note what really remarkable results they can obtain.



"Robinson's Lime Juice and Pepsin" is an excellent remedy in the gastric derangements particularly prevalent at this season. It is superior as a digestive agent to many other similar goods. (See page — of this issue.)

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# THERAPEUTIC BRIEFS.

**Arteriosclerosis.—**

Where there is stenocardia, the following mixture affords great relief:

Diuretini ..... .....dr. j.
Sodii Iodidi.....gr. viij.
Aquae Destill.....
Aquae Menth. Pip.....aa oz. iij.

An appropriate daily dose to be given.

**Inflamed Joints.—**

The *American Journal of Clinical Medicine* gives the following mixture for this affection:

Acidi Salycili.....dr. iij.
Tinct. Opii.....dr. jss.
Ol. Terebinthinae.....dr. j.
Ol. Caryophilli.....oz. iij.
Alcoholis .....q.s. oz. xij.

Rub on the affected parts every two or three hours. Chloroform may be substituted for the oil of cloves if desired.

**Orchitis.—**

Christian recommends the following outward application for use after the subsidence of the acute inflammation:

Ungt. Hydrargyri.....
Ungt. Belladonnae.....
Ichthyolsi .....
Adipis Lanae.....aa dr. ij.

Sig. Apply locally.

**Gall-Stone Colic.—**

De Vevet has shown that in oleic acid we have a powerful preventive of biliary lithiasis. It should be given in 8 minim. doses in capsules, one morning and evening for several weeks. If necessary the dose may be increased to 16 minims, and the length of time prolonged, with regular intermissions. By this means the paroxysms may be both relieved and prevented.

**Cirrhosis.—**

Ortner recommends the following intestinal antiseptic in portal cirrhosis:

Bismuthi Salicyl.....
Bentanaptholis.....oz. ss.
Sodii Bicarb.....aa dr. ij.

Div. in xxx equal parts. A powder after each meal.

**Bronchitis.—**

McPhedran recommends the following for inhalation in acute bronchitis:

Ol. Pini Sylvestris.....
Ol. Eucaplypti.....aa gr. xv.
Mentholis .....gr. v.
Magnesii Carb.....gr. x.
Tr. Benz. Comp.....oz. j.

Sig. A teaspoonful in a pint of hot water.

**Prurigo.—**

Robin forbids the use of fermentable foods, gives strychnia and nux vomica before meals, and the following powder after meals:

Magnesia Oxid.....
Sodii Bicarb.....aa gr. lx.
Calcii Varb. Prescrip.....gr. xc.
Belladon. Pulv.....gr. j.
M. Ft. pulv.....xll.

**Eczema.—**

In eczema of the genitals and about the anus the following is recommended by G. Hahn:

Lenigallol ..... 1.25 grams.
Zinci Oxidi.....
Amyli .....aa 2.00 grams.
Ungt. Lenientis.....
Ungt. Simpl.....aa 25.00 grams.

**For Ulcerating Chilblains.—**

Hydrarg. Amoniat..... 0.3.
Ichthyol ..... 0.6.
Pulv. Amyli..... 8.0.
Zinc Oxide..... 8.0.
Paraffini Mollis.....16.0.

M. ft. ung. Spread freely on gauze and apply frequently.

**Uremia.—**

In these cases care should be taken to insure the free working of the gall-bladder, for which the following pill is useful:

Sod. Oleati Acidi.....gr. ij.
Phenolthalein .....gr. ij.
Methyl Salicyl.....gr. v.
Mentholi .....gr. ¼.

**To Kill Craving for Liquor.—**

Oil Capsicum.....dr. ss.
Tr. Quassia.....dr. iij.
Tr. Cinchona Comp.....oz. iss.
Tr. Avena Sativa.....q.s. ad oz. iv.

M. Sig.: One teaspoonful in water every three hours.

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# ELECTRO-THERAPY.

EDITED BY NOBLE M. EBERHART, A. M., M. D.
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## THE ROENTGEN RAY IN POST-OPERATIVE CASES.*

R. D. MASON, M. D., Omaha, Neb.
(*From The Medical Herald.*)

IT IS very generally conceded by the profession that cancer is the most difficult disease that we are called upon to combat. Internal medicine stands absolutely powerless to relieve, and surgery can only promise relief in a limited number of cases. Many methods of cure have been advocated both by the medical profession and the laity, but nearly all have been discarded as worthless.

When the X-ray was discovered it was thought that at last a cure had been found and nearly every physician who could afford to do so, bought a static machine and went to treating cancer. Time has shown that the good accomplished did not equal the harm done. Gradually, however, the X-ray has found its place and is doing good work as an aid to surgery in its fight against this dread disease. Experienced roentgenologists do not now attempt to cure deep-seated, extensive cancerous growths by the use of the X-ray alone, but advise that they be first excised and then as soon as the patient is able, the wound is carefully and thoroughly rayed.

No one who has had any experience, either personally or by careful observation will now deny that the X-ray has proven beneficial in a large number of cases. This being granted it becomes a duty to advise its use as a routine post-operative measure. Some may think that this is an extreme view to take and argue that it is not needed in all cases. To these I would ask, who can tell in just what cases it is needed? Often the patient who presents the greatest hope of cure is the one in which there is the most rapid return of the disease following operation. The surgeon who has had the least experience with the X-ray is usually the one who opposes its use, and repeated observation will invariably convince him that great benefits may be derived from its use in suitable cases, when the work is done by one who is competent. This is very technical work and should not be attempted by one who has not had training or who does not have a sufficient number of patients to keep him abreast of the advancing standard of the science. It seems somewhat unfortunate that some surgeons who have had no personal experience in X-ray work, will advise their patients to have some definite number, say five to ten, treatments given when even a trained roentgenologist cannot tell in advance how many treatments may be needed. Instead of five it may require fifty. The patient should, if possible, be kept under the observation of both the surgeon and the roentgenologist for a year or even longer, and after the first two or three series of treatment are given others are only made use of as indications arise. Patients differ considerably as regards their susceptibility to the rays and the pathology of the tumor removed, the depth of the skin and other structures through which the rays must pass, the extent of the surface involved and many other things must be considered;

*Read before the Medical Society of the Missouri Valley at St. Joseph, Mo., March 17, 1911.

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some of which can only be known definitely as the treatment advances. Because of these things, no one can tell in advance how many treatments may be required in a given case. Some advise the use of the rays only where there is a return of the disease. This, in my opinion, is extremely unfortunate. By the time the disease has returned so that its presence is visible to the eye, the prospect of cure has often passed away and the case is hopeless. The most dangerous form of recurrence is that which takes place deep in the wound and is not seen until it has made serious advances. Besides this, a recurrence is much more difficult to cure than the original disease. Early, prolonged use of the X-ray will, in many instances prove the only means of saving the patient's life. It has been advised, and by good authority to leave the wound wide open, making no attempt to close it, if it be in a location where this can be done, and apply the rays to the raw surface. While I would not go so far as this, I feel sure that the rays should be used as soon as the patient's condition will permit. There is no doubt that in most cases, immediately following an operation for the removal of malignant disease, the dangerous cells left behind are weakened and scattered, partly because of their blood supply being cut off and their nutriment destroyed, and partly because of the mutilation and disorganization of the tissues in which they are embedded, and for this reason there is far more chance to destroy them by means of the rays than after they have become reorganized and taken on vigorous growth.

Some ask, why subject the patient to this added expense unless it is known to be absolutely necessary. It would be just as proper to ask why growths known almost to a certainty to be benign are removed. The answer in either case would be, that there is an element of possible danger present and it is a duty which we owe to our patients to remove it. When a patient consults a physician or surgeon in regard to the cure of his malady he expects and in fact has a right to demand that every possible recourse be applied to restore him to health. When the surgeon removes the cancerous growth he does not guarantee a cure and this is not asked of him by the patient, but he does promise to make use of every means at his command to accomplish the result. In some cases the knife alone will fail, and in some cases the X-ray alone will fail. It is also true that in some they both fail, but it is well known that either alone will sometimes succeed. Combined the chances of success are very much enhanced. As regards the expense that will be incurred by the use of this agent, the surgeon should not take this into consideration other than to explain to the patient that he considers it is a necessary part of the treatment and that he advises it in all cases following operation. If, after the matter has been put to the patient fairly and honestly, he refuses to follow the surgeon's advice, he has no one to blame but himself and should the disease return, the surgeon may justly feel that he has done his duty. As a matter of fact the expense is not usually very great and bbut few hesitate to pay the amount required when they understand the necessity of this added precaution. If one hesitates to advise the expense of X-radiation he may by the same reasoning refuse to advise the original operation, for it is not known to a certainty that either will effect a cure. I feel sure that the X-ray has prevented recurrence in some cases treated by me, and I know to a certainty that it has apparently cured several cases where recurrence had actually taken place, as will be explained later.

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This brings up the question of what to do with patients who have cancers, believed to be incurable, and yet where it is thought that something might be done to prolong life and add comfort to the patient until death occurs. I have several times treated cases of this kind where the disease has been held in check and the patient kept free from pain and discharge for months, and cases are recorded by good authority, where the disease has been held in abeyance for two or more years. It is unfortunate for the roentgenologist that the surgeon should send him these and other incurable cases upon whom he refuses to operate, because it puts the X-ray in bad repute with the laity. We cannot tell our patients that we do not expect to cure them and that all we hope to do to somewhat relieve their condition and, while we confide this to our friends, it is generally understood in the neighborhood in which they reside that the patient is taking X-ray treatments, and although her condition may have been very materially relieved for a long time, when death occurs the X-ray is reported as having proven a failure. While this is true, no medical man worthy of the name will refuse to do all in his power to alleviate suffering, even though he may not be able to cure. An other unfortunate thing which the profession ought to overcome is the fear held by the laity of burns. In the early history of the use of this remedy, burns were frequent, but with our present knownedge and improved apparatus, this accident is of rare occurrence, and I think I am justified in saying that it is entirely unnecessary. With three years experience in this work, both in radiography and therapeutic treatments, I have yet to encounter my first burn.

I would like to describe very briefly a few cases that have come under my care. Some of these were operated on by myself and some by other surgeons:

Case I.—Carcinoma of the breast, involving nearly the whole gland. Patient 65 years of age. X-ray treatment commenced as soon as wound healed. About twenty X-radiations given. No return nearly three years after last treatment.

Case II.—Patient's age about 40. Carcinoma of uterus. Was operated on for cancer of cervix. Later entire uterus and appendages were removed with temporary relief. When recurrence took place, as further operation was out of the question, she was advised to have the X-ray used. While she thought this was going to cure her, it was explained to her friends that all that could be hoped for was temporary relief. It was quite remarkable the way she improved for awhile. The pain left to such an extent that she stopped the use of morphine, which she had been using quite freely. The vaginal discharge ceased, and her friends thought she was going to get well. There is no doubt that her days were considerably prolonged and made more comfortable by this remedy.

Case III.—Male, age 70. Cancer of breast. A tumor about three inches in diameter was removed which the pathologist pronounced a scirrhus growth. The wound had scarcely healed before a new growth appeared around the edges of the incision. This was of so pronounced a type that there was no question in the minds of all who saw it that it was a recurrence. Eighteen X-radiations were given with a complete disappearance of the growth. Nearly a year has passed and the patient is apparently cured. This case showed in a most remarkable way the value of the X-ray, as the disappearance of the new growth could not be accounted for in any way except the use of this remedy and when it was applied the growth promptly subsided and has not returned.

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Case IV.—This was a girl about 12 years old. Growth on thumb which was excised but soon returned. As no examination of the tumor was made, the pathology is not known. Only four X-ray treatments were given, when to the surprise of all the new growth disappeared and has not returned so far as I know, although I have not heard from the patient for about two years. Treatments were given three years ago.

Case V.—Patient age 45. Carcinoma of both breasts with complete removal of same, including glands in axillas and neck. This patient has had three series of treatments or about seventy altogether, and in fact is still under observation. There has been several suspicious places which have seemed to show a return of the disease but prompt and persistent use of the rays have caused them to disappear. While it is not too late for a recurrence in a virulent form, the chances seem good for a permanent recovery. This case illustrates, to a remarkable degree, the benefit to be derived from the combined use of surgery and X-ray. I feel sure that had either alone been depended upon the result would have been fatal. Combined they have apparently proven successful.

The writer will no doubt be pardoned for saying that he speaks from personal experience as a patient where both surgery and X-ray were tested to the limit of their powers and that the faith put in their combined efficiency was not misplaced. The feeling that all possible was being done was one not appreciated by those who have not had actual experience.

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## THE PRINCIPLE OF STATIC ELECTRICAL TREATMENT.

Otto Juettner, in the *Physicians' Drug News,* points out that analagous to the atmospheric pressure which regulates the intra-vascular blood pressure, the functional energy of nerve-tissue is regulated by the terrestrial magnetic field by which we are surrounded. Diminution of air pressure causes dilatation of the vessels along the external and internal surface of the body. This accounts for the occurrence of hemorrhages, especially of the exposed mucosa, when atmospheric pressure is decreased.

When the potential of the positive magnetic energy is lessened, it diminishes the degree of active control which the nerves, the carriers of life-energy, exercise over the several parts of the organism. Thus the muscular fibers in the blood-vessel wall are relaxed and the vessel itself dilates, the moment the magnetic or electrical tone of the vasomotors is lessened. This occurs through the cutaneous nerves which are alone exposed to influences of a magnetic character. The skin-nerves receive the impetus, the voso-motors show its physiological presence. This explanation is an analogous to the physiological syllogism by which Winternizt explains the action of thermic stimuli. If the patient receives a negative spray, the positive potential of the region is lessened, the nerve-tension decreases, the tissues relax and the arteries dilate. We look upon negative applications of static electrification as being stimulating in character because the arteries dilate and the amount of arterial blood increases. The more the positive potential of the body decreases, the more stimulating will be the effect of a negative static modality. The stimulating effect will finally merge into an irritating action as seen by the redness and soreness of the skin whicch frequently follows negative local applications. If the potential of the body is increased, the electrical action will be restorative, tonic, sedative. If applied to the head the positive current will cause cerebral anemia and somnolence; the negative current will stimulate, cause wakefulness and mental activity.

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The skin is undoubtedly the scene of action of static modes. Through the skin the whole system is reached, a sedative or a stimulating effect being reflected through the sympathetic nervous system, as well as by contiguity of tissue. Thus we may produce a distinctly physiological effect of the renal circulation by applying a wave-mode to the small of the back in case of chronic interstitial nephritis. That the static modality is of the greatest value in disorders of the skin itself, goes without saying.

A characteristic effect of static electrification is its action on oxygen. Oxygen has an affinity for positive electrification. When a positive charge of static electrification passes through a volume of oxygen, a disintegration of the gas and a re-arrangement of corpuscles of oxygen take place. A new gas is formed which has negative affinity and is tri-atomic. It is called ozone and has a characteristic odor. The passage of a flash of lightning through the atmosphere likewise produces ozone (tri-atomic oxygen). ($O_3$).

From what has been said concerning the physiological effects of static electrification, we are prepared to summarize the therapeutic indications of the several static modes as follows:

1. Positive static electrification is to be administered to counteract hypermia, nervous irritability, pain due to congestion, exaggerated reflexes, and all conditions due to over-stimulation. It is a gentle circulatory regulator, nervous sedative and analgesic.

2. Negative static electrification is to be administered to counteract sluggishness of the circulation, lack of nerve-response, pain due to venous statis (ischemia), absent or retarded reflexes and all conditions requiring stimulation. It is a decided stimulant, excitant and even irritant.

## X-RAY IN PROSTATIC HYPERTROPHY.

Sinclair Tousey reports two cases of this treatment which consists in the application of the X-ray through a screen of sole-leather which absorbs the rays which would be absorbed by the skin and produce dermatitis with little or no influence upon the deeper structures. The X-ray was applied to the perineum through a cylinder either three or five inches in diameter which limited the field of exposure and protected the scrotum. The application of high frequency currents was an external one through a glass vacuum electrode applied over the perineum and later over the hypogastrium.

CASE 1.—Mr. I. A., referred by Dr. H. R. Armstrong, began to have difficulty in micturition ten or twelve years ago and was then examined by Dr. Keyes who found prostatic hypertrophy and recommended the use of a catheter. This was done three or four times, but with so much distress that the patient gave it up. During these years there have been some retention, hardly any pain, but a numb feeling at the neck of the bladder. Frequency of micturition has been the symptom giving most trouble. The patient had to get up twelve or fourteen times each night. A radiograph was made which excluded vesical or prostatic calculus as a cause of the symptoms. Treatments were given three times a week from March 25, to May 31, 1910. By April 8th, micturition was reduced from fourteen to three or four times a night and by April 27th, only two or three times a night, and the patient came seventy miles on the railroad train without having to urinate. The end of the course of treatment left him apparently in a normal condition and his physician reported on December 1, 1910, that there had been no return of trouble.

CASE. 2.—A man of 73, a patient of Dr. A. D. Rockwell, had been treated by our best urologist for some years for

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enlargement of the middle lobe of the prostate. At the worst there had been eight ounces of residual urine but this had been reduced to four ounces. He used a catheter every morning and was advised to have an operation. As he came under my care the last week that I was in the city I applied a complete dose of X-ray in three treatments, June 22, 24, and 28, 1910. His report on November 9, 1910, was that there had been very great improvement; he no longer used the catheter and there was much less frequency of micturition. Residual urine continued to be four ounces. A second course of treatment was given three times a week from November 14 to December 5, 1910, and before the latter date he reported that he was able to go to bed at 11 P. M. and rise at 7 A. M. without having to urinate in the meantime.

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### TO RENEW DRY BATTERIES.

E. M. Hanson, in the *Journal of the American Medical Association*, gives the following method for increasing the efficiency and life of dry cell batteries:

"When my dry battery has become exhausted, I take an ordinary ⅜-inch drill-bit of sufficient length and drill a hole as near as possible to the carbon and between the carbon and the outside zinc covering. This hole should reach out within 1 inch of the bottom of the cell, beginning, of course, at the top or sealed part of the battery. I shake out of the cell all loose dust and particles, and place in this hole 1½ ounce glass funnel, having a stem not less than 1½ inches in length, and of sufficient thickness to fit snugly, especially at the upper part of the hole already prepared. This will prevent regurgitation of liquids to outside top of cell. Having secured the funnel firmly in the cell, I pour into it until three-fourths full (about an ounce) of chemically pure hydrochloric acid. This will start an immediate reaction and hydrogen and air bubbles containing particles of contents of the cell will regurgitate through the funnel and contents. It will require from eight to twenty-four hours for this reaction to be completed and the hydrochloric acid absorbed. Owing to a tendency for the small funnel to become clogged, it is necessary from time to time to pass a slender wire down through the funnel neck and hole in the cell. After absorption of the acid, I pour water in the funnel just as long as the cell will take it. When the cell has become thoroughly saturated inside, I seal it carefully with ordinary sealing wax, set aside for twenty-four hours or longer, and test the cell for battery power. If the work has been carefully done, the results will not be disappointing.

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### ROENTGEN IRRADIATION.

James W. Hunter, in the *Virginia Medical Semi-Monthly*, remarks that it has greatly puzzled röntgenologists why an untreated patch of lupus or psoriasis in the same patient should improve at the same time as the one treated by Röntgen irradiation. Why was it that tubercular glands of the neck improved so nicely? Why, the condition of things as stated above? At last we have the explanation. To Sir Almoth Wright and to Metchnikoff we must look for an answer. We have on the one hand an auto-vaccination; on the other, a phagocytosis. By exposing the lesion in question to the Röntgen ray we have killed many of the bacteria *in situ*, and have exerted the natural forces of nature. The killed bacteria are themselves taken into the blood stream as well as their liberated toxins. It is these stimulating the antidotes of the blood that have caused an absorption and cure of the lesion treated.

It has also been observed that recently enlarged glands when treated by Röntgen irradiation will be greatly reduced. In my own experience, continues

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the author, I have cured an exophthalmic goitre in a young lady. I have greatly reduced and have largely overcome the attending symptoms in a case of over twenty years standing in a lady aged fifty. I have also iradiated seven cases of senile hypertrophy of the prostate with a relief of the symptoms in four, a marked improvement in one now under treatment, and a very slight improvement in two. In other words, I should say of seven cases, the youngest 58 and the oldest 80, I have cured four, have greatly benefited one (now under treatment), and have slightly improved two.

In what way and why does the irradiated gland so respond? Briefly, my ideas are these: That a parenchymatous enlargement is due entirely to either the proliferation or increase in size of the epithelial glandular cells, and it is the special affinity of this sort of tissue for the Röntgent ray that causes a reduction in their size and number; later there is a phagocytosis or absorption of the end products. But in the case where the enlargement is due to the proliferation of connective tissue, it is only by the still greater contraction of that tissue that relief can be afforded.

And lastly, the Röntgen ray has been used as a stimulant in certain cases to cause a regeneration. Particularly would I refer to its employment in unresolved pneumonias. The results are more than encouraging. Again, it has been proposed to treat splenic myelogenous leucemia by the irradiation of the marrow of the long bones. Some results have been accomplished, it is true, but I, myself, feel that until we know more of the ætiology of this disease, we can hope to accomplish but little. In marked contrast, however, I may add that by means of Röntgen irradiation I have most materially helped to restore the pigment in a skin affected by leukoderma.

Such then is the action of the Röntgen ray. It acts upon the cell, the epithelial or protoplasmic cell, and not on that arising from connective tissue, though in destroying an epithelium of a less resistant type, its place has been taken, as in any other inflammatory process, by scar tissue. It acts upon those tissues arising from the epiblast, particularly the skin, for this reason. Mucous surfaces, being of a non-resistant nature in themselves to malignant invasion and also continually bathed in secretion, are not, therefore, suitable for irradiation.

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### CARBON DIOXIDE SNOW IN NAEVI.

J. L. Bunch, in *Folia Therapeutica*, states he has successfully treated with solid carbon dioxide more than 300 nævi of various extent and size. Most of the cases occurred in children, and were treated at the Queen's Hospital for Children, and included capillary, stellate, cavernous and pigmented nævi, some small and some several inches in diameter, flat or markedly raised above the adjacent healthy skin, forming prominent red or purple swellings. In children the painlessness and rapidity of any method of treatment is of the greatest importance, and a method which is capable of curing a superficial nævus without pain by a single application lasting merely a few seconds can hardly be improved upon.

The action of the freezing agent is other than that of a caustic and the resulting tissue changes are different. The histological changes in skin which has been frozen with carbon dioxide have been investigated by several observers, and more particularly by Juliusberg. If normal skin is frozen and then immediately excised, sections of it show no pathological changes except thrombosis of the cutaneous vessels. If, however, normal skin is frozen hard for 30 seconds and excised 14 hours afterwards and hardened in 10 per cent formalin solution sections show a similar throm-

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bosis of the blood vessels, the thrombi being either hyaline or composed of leucocytes, erythrocytes, or both. Round the vessels is a well-marked infiltration of leucocytes. The lymphatics are dilated and filled with coagulated, homogeneous masses. Such sections show, however, the most marked changes in the epithelial layer, the cells of which appear structureless and homogeneous, and the nuclei are clear and, with the exception of some nuclei of the basal layer, do not stain. It is well known that at a temperature below 4° C. water expands, and this expansion might, in the case of the epithelial cell contents, lead to rupture of the cell membrane and the katabolic appearances seen in the sections. Beneath the epithelium is found a layer of large polynuclear leucocytes, which also infiltrate the connective tissue, while the connective tissue cells are swollen and hypertrophied. The elastic fibres are unchanged, but, if the section is stained with Weigert's fibrin stain, the whole connective tissue layer is found to be full of fine strands of fibrin.

It has been conclusively proven that neither liquid air nor solid carbon dioxide destroy the pathogenic properties nor inhibit the activity of micho-organisms, and this must be remembered when treating lupus and rodent ulcer.

Various forms of apparatus have been devised for the manufacture of suitable crayons or sticks of solid carbon dioxide, the essential being that the crayon shall be coherent, hard, of sufficient size and readily molded or cut to the desired shape. The necessary hardness—the crayon should sink when thrown into water—can be obtained by compressing the snow in a mold by a heavy rod cut to fit the mold, or by a plunger with a screw head which is screwed down on to the soft snow until it is of the consistence of ice. With such an apparatus the solid carbon dioxide can be made nearly transparent and the point of the cone formed by a mold to any desired shape, it being possible to obtain a point so fine that it will freeze a nævus the size of a pin's head without affecting the adjacent skin.

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## X-RAY DIAGNOSIS OF DIGESTIVE TRACT.

G. R. Satterlee presented to the American Medical Association some observations made in the Dispensary of the University and Bellevue Hospital Medical College, in the Edward N. Gibbs X-ray Laboratory. After considering the anatomy of the gastrointestinal tract in normal cases the motility in normal and pathologic states and the size and position of the viscera in some abnormal conditions, the writer described the method that they had used in making these observations. For the average adult they administered 75 grams of bismuth subcarbonate, suspended in 500 cc. of fermented milk. This was swallowed on an empty stomach, without previous catharsis. The radiographs were made by exposures of from one-sixth of a second to one second. The first radiograph was taken in from ten to fifteen minutes after the ingestion of the bismuth; the second was taken one-half hour after the bismuth. Six or seven were taken successively at intervals of one, two, three, four, five, six, and sometimes seven or eight hours after the bismuth was taken. Other radiographs might be taken after twenty-four and thirty-one hours. In every case exposures were taken at twelve to twenty-four-hour intervals until the last trace of bismuth had left the intestinal tract. Dr. Saterlee's observations had been made on twenty-eight patients with several duplicates as controls and three hundred and eight plates had been studied. The following conclusions were drawn: (1) The length of time that the contents of the gastrointestinal tract first reached each division of the tract, and the time in which

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each division was completely emptied could be definitely determined in each individual by means of the bismuth Röentgen of ray test. (2) The normal activity of each part of the gastrointestinal tract could be definitely established. (3) The food, immediately after ingestion, began to pass into the small intestines, and by the end of an hour at least one-quarter of the gastric contents was in the jejunum. (4) The stomach was emptied of 500 cc. of milk or soup in two and one-half to four hours. (5) The time to the cecum of this meal averaged two hours and varied from one to five hours; it was shorter in children. (6) The complete emptying of the colon consumed from twenty-four to forty-eight hours. (7) The complete emptying time of the small intestine after this meal was probably about six hours. (8) The bismuth Röentgen-ray test was harmless and practical. (9) The ordinary methods of medical treatment could be more intelligently applied with the improvement in diagnosis accomplished by this test. (10) The bismuth Roentgen-ray test should be employed before an operation for a chronic condition of the gastrointestinal tract was performed.

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## VIBRATORY TREATMENT OF SKIN ULCERATIONS.

Cyriax, in the *New York Medical Journal,* divides skin ulcers into simple inflammatory, infective or specific, and malignant. The writer confines himself in his paper to the treatment of the first class, yet he believes tuberculous forms are also amenable to treatment by this method. The manual treatment of ulcers consists of: local manipulations on and around the ulcer; local manipulation on the affected limb or part of the body; general (constitutional) manipulations. Either the tips of a portion of the palmar aspect of the fingers of one or both hands are placed above or below, on either side of or around the ulcer. The fingers are then set into rhythmical vibration. The rapidity of these vibrations should be approximately from ten to twelve in a second. This vibratory massage is continued up and around the edges of the ulcer. The lesion itself is also treated. A piece of lint covers it and manipulation is done through it. In many instances the immediate results of these vibrations will be seen in the bathing of the margins of the ulcer with a clear fluid. This should always be striven for. In conclusion the writer says that the effects are immediate and remote. 1. Immediate; (a) subjectively; if pain is present it is removed or diminished. Generally during the course of the manipulations or sometimes only at their conclusion, there arises in the ulcer a feeling of irritation and itching, which is sometimes very intense. This, however, soon passes off (from fifteen minutes to three hours), being replaced by a pleasant sensation: to quote the patient's in words, "it feels as if the place were healing."

(b) Objectively. Dimunition in the degree of redness results; an exudation of lymph takes place, as already mentioned; slough and débris are removed. The author has more than once seen granulations appear in an ulcer during the actual application of treatment.

2. Remote. Briefly these may be defined as healing. It is of frequent occurrence to observe that ulcers which have for weeks, maybe for months, resisted all ordinary forms of treatment, show signs of improvement within 24 hours of the first application of the treatment described.

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Hyrtl asked a candidate for an M. D. what the function of the spleen was. After some thought the student said: "Well, professor, I did know, but I have forgotten it." "Unhappy soul!" said Hyrtl. "The only man in the world to know the function of the spleen and now you have forgotten it."

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# THE DOCTOR'S EASY CHAIR

## ON BEING HARD UP.

JEROME K. JEROME.

I can speak with authority on the subject of being hard up. I have been a provincial actor. If further evidence be required, which I do think likely, I can add that I have been a "gentleman connected with the press." I have lived on fifteen shillings a week. I have lived a week on ten, owing the other five; and I have lived for a fortnight on a great-coat.

It is wonderful what an insight into domestic economy being really hard up gives one. If you want to find out the value of money, live on fiffteen shillings a week, and see how much you put by for clothes and recreation. You will find cut that it is worth while to wait for the farthing change, that it is worth while to walk a mile to save a penny, that a glass of beer is a luxury to be indulged in only at rare intervals, and that a collar can be worn for four days.

Try it just before you get married. It will be excellent practice. Let your son and heir try it before sending him to college. He won't grumble at a hundred a year pocket money then. There are some people to whom it would do a world of good. There is that delicate blossom, who can't drink any claret under ninety-four, and who would as soon think of dining off cats' meat as off plain roast mutton. You do come across these poor wretches now and then, though to the credit of humanity, they are principally confined to that fearful and wonderful society known only to lady novelists. I never hear of one of these creatures discussing a *menu* card, but I feel a mad desire to drag him off to the bar of some common East End public-house, and cram a six-penny dinner down his throat—beefsteak pudding, fourpence; potatoes, a penny; half a pint of porter, a penny. The recollection of it (and the mingled fragrance of beer, tobacco, and roast pork generally leaves a vivid impression) might induce him to turn up his nose a little less frequently in the future at everything that is put before him. Then, there is that generous party, the cadger's delight, who is so free with his small change, but who never thinks of paying his debts. It might teach even him a little common-sense. "I always give the waiter a shilling. One cant give the fellow less, you know," explained a young government clerk with whom I was lunching the other day in Regent Street. I agreed with him as to the utter impossibility of making it elevenpence ha'-penny, but, at the same time, I resolved to one day decoy him to an eating-house I remembered near Covent Garden, where the waiter, for better discharge of his duties, goes about in his shirt-sleeves—and very dirty sleeves they are too, when it gets near the end of the month. I know that waiter. If my friend gives him anything beyond a penny, the man will insist on shaking hands with him then and there, as a mark of his esteem; of that I feel sure.

There have been a good many funny things said and written about hardupishness, but the reality is not funny, for all that. It is not funny to have to haggle over pennies. It isn't funny to be shabby, and to be ashamed of your address. No, there is nothing at all funny in poverty—to the poor. It is hell upon earth to a sensitive man; and many a brave gentleman, who would have faced the labors of Hercules, has had his heart broken by its petty miseries.

It is not actual discomforts themselves that are hard to bear. Who would mind roughing it a bit, if that were all it meant? What cared Robinson Crusoe

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for a patch on his trousers?—Did he wear trousers? I forget; or did he go about as he does in the pantomimes? What did it matter to him if his toes did stick out of his boots? and what if his umbrella was a cotton one, so long as it kept the rain off. His shabbiness did not trouble him: there were none of his friends round about to sneer at him.

Being poor is a mere trifle. It is being known to be poor is the sting. It is not cold that makes a man without a greatcoat hurry along so quickly. It is not all shame at telling lies—which he knows will not be believed—that makes him turn so red when he informs you that he considers greatcoats unhealthy, and never carries an umbrella on principle. It is easy enough to say that poverty is no crime. No; if it were, men wouldn't be ashamed of it. It's a blunder, though, and is punished as such. A poor man is despised the whole world over; despised as much by a Christian as by a lord, as much by a demogogue as by a footman, and not all the copy-book maxims ever set for ink-stained youth will make him respected. Appearances *are* everything, so far as human opinion goes, and the man who will walk down Piccadilly arm in arm with the most notorious scamp in London, provided he is a well-dressed one, will slink up a back street to say a couple of words to a seedy-looking gentleman. And the seedy-looking gentleman knows this—no one better—and will go a mile round to avoid meeting an acquaintance. Those that knew him in his prosperity need never trouble themselves to look the other way. He is a thousand times more anxious that they should not see him than they can be; and as to their assistance, there is nothing he dreads more than the offer of it. All he wants is to be forgotten; and in this respect he is generally fortunate enough to get what he wants.

One becomes used to being hard up, as one becomes used to everything else, by the help of that wonderful old homeopathic doctor, Time. You can tell at a glance the difference between the old hand and the novice; between the case-hardened man who has been used to shift and struggle for years, and the poor devil of a beginner, striving to hide his misery, and in constant agony of fear lest he should be found out. Nothing shows this difference more clearly than the way in which each will pawn his watch. As the poet says somewhere: "True ease in pawning comes from art, not chance." The one goes into his "Uncle's" with as much composure as he would into his tailor's—very likely with more. The assistant is even civil and attends to him at once, to the great indignation of the lady in the next box, who, however, sarcastically observes that she don't mind being kept waiting "if it is a regular customer." Why from the pleasant and business-like manner in which the transaction is carried out, it might be a large purchase in the Three per Cents. Yet what a piece of work a man makes of his first "pop." A boy popping his first question is confidence itself compared with him. He hangs about outside the shop, until he has succeeded in attracting the attention of all the loafers in the neighborhood, and has aroused strong suspicions in the mind of the policeman on the beat. At last, after a careful examination of the contents of the windows, made for the purpose of impressing the bystanders with the notion that he is going in to purchase a diamond bracelet or some such trifle, he enters, trying to do so with a careless swagger, and giving himself really the air of a member of the swell mob. When inside, he speaks in so low a voice as to be perfectly inaudible, and has to say it all over again. When, in the course of his rambling conversation about a "friend" of his, the word "lend" is reached, he is promptly told to go up the court on the right, and take the first door around the

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corner. He comes out of the shop with a face that you could easily light a cigarette at, and firmly under the impression that the whole population of the district is watching him. When he does get to the right place he has forgotten his name and address and is in a general condition of hopeless imbecility. Asked in a severe tone how he came by "this," he stammers and contradicts himself, and it is only a miracle if he does not confess to having stolen it that very day. He is thereupon informed that they don't want anything to do with his sort, and he had better get out of this as quickly as possible, which he does, recollecting nothing more until he finds himself three miles off, without the slightest knowledge how he got there.

By the way, how awkard it is, though, having to depend on public houses and churches for the time. The former are generally too fast, and the latter are too slow. Besides which, your efforts to get a glimpse of the public-house clock from the outside are attended with great difficulties. If you gently push the swing door ajar and peer in you draw upon yourself the contemptuous looks of the barmaid, who at once puts you down in the same category with area sneaks and cadgers. You also create a certain amount of agitation among the married portion of the customers. You don't see the clock, because it is behind the door; and in trying to withdraw it quietly you jamb your head. The only other method is to jump up and down outside the window. After this latter proceeding, however, if you do not bring out a banjo and commence to sing, the youthful inhabitants of the neighborhood, who have gathered round in expectation, become disappointed.

I should like to know, too, by what mysterious law of nature it is that, before you have left your watch "to be repaired" half an hour, some one is sure to stop you in the street and conspicuously ask you the time. Nobody even feels the slightest curiosity on the subject when you've got it on.

Dear old ladies and gentlemen, who know nothing about being hard up—and may they never, bless their gray old heads—look upon the pawnshops as the last stage of degradation; but those who know it better (and my readers have, no doubt, noticed this themselves) are often surprised, like the little boy who dreamed he went to Heaven, at meeting so many people there that they never expected to see. For my part, I think it a much more independent course than borrowing from friends, and always try to impress this upon those of my acquaintance who incline toward "wanting a couple of pounds till the day after tomorrow."

But they won't all see it. One of them once remarked that he objected to the principle of the thing I fancy if he had said it was the interest that he objected to he would have been nearer the truth; twenty-five per cent certainly does seem heavy.

There are degrees in being hard up. We are all hard up, more or less—most of us more. Some are hard up for a thousand pounds; some for a shilling. Just at this moment I am hard up myself for a fiver. I only want it for a day or two. I should be certain of paying it back within a week at the outside, and if any lady or gentleman among my readers would kindly lend it me, I should be very much obliged indeed. They could send it to me under cover to my publishers, only, in such case, please let the envelope be carefully sealed. I would give you my I. O. U. as security.

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# BOOK REVIEWS.

COLLECTED PAPERS BY THE STAFF OF ST. MARY'S HOSPITAL MAYO CLINIC. Rochester, Minnesota, 1905-1909. W. B. Saunders Co., Philadelphia and London, 1911.

This book represents a contribution of experience and observation to the surgical knowledge of the times, gathered in the course of five years' exceptional opportunity and work in the Mayo clinic. The largest number of articles in the book are contributed by the Mayos themselves, the rest by their clinical associates and assistants. As might be expected, quite half the work is devoted to surgical diseases of the alimentary tract, upon which the Mayos have been concentrating their attention during the period covered by the book. There is, of course, nothing of the order and classification that one finds in the text book, but the work has a personality, and a vitality to it that the text book lacks. Many physicians and surgeons who have been to Rochester and seen the Mayos and their staff at work, and many who have not been able to avail themselves of this privilege, will read with avidity and profit what these experienced surgeons have to say concerning the subject-matter that has passed through their hands during the past five years.

THE CARE OF THE BABY. By J. P. Crozer Griffith, M. D., Clinical Professor of Diseases of Children in the University of Pennsylvania. Fifth Revised Edition. 12mo. of 455 pages, illustrated. Philadelphia and London. W. B. Saunders Company, 1911. Cloth, $1.50 net.

When we reviewed the last edition of Dr. Griffith's excellent little manual we predicted that it would not be long before it would be exhausted, and another issue called for; but we confess we hardly expected so quick a verification of our prediction. Not that we are a bit surprised. We know of no man in the United States with a more intimate and intelligent knowledge of the baby, from the standpoint of its care and health, or with a happier way of imparting his knowledge, in plain, understandable language, to the mother and the nurse—so that the name of Crozer Griffith has become classically identified with the subject. The book very properly begins with the time "before baby comes," and takes us through every phase of infant life and care, with the most sensible and helpful directions concerning its feeding, its toilet, its clothes, its sleep, its training, its quarters, and in short, every conceivable aspect of baby life. In this latest edition a chapter is included on dietary—not a detailed affair, but just the basic principles of the subject, for fundamental guidance, and a section on the Sick Baby, giving instructions for the management of the commoner, minor troubles that affect the infant. Everything in the book is strictly scientific and up-to-date, without being ultra-scientific or impracticable. We can think of no better or safer guide for the mother or the nurse.

1000 SURGICAL SUGGESTIONS. By Walter M. Brickner, B. S. M. D., Adjunct Surgeon Mount Sinai Hospital, Editor in Chief American Journal of Surgery, with the collaboration of James P. Warbasse, M. D. Harold Hays, M. D., Eli Moschcowitz, M. D. and Harold Neuhof, M. D. 225 pages. Cloth Bound Semi-de Luxe, $1.00. Full de Luxe, Leather, $2.25. New York, Surgery Publishing Company, 92 William Street.

This is one of the biggest little books ever presented to the profession. In its 225 pages are found a collection of 1000

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epigrammatic, succinct, virile and instructive hints based upon actual experience and everyone a lesson in itself. The Suggestions are so arranged and indexed that all subjects covered can be immediately referred to and the particular hint upon any particular subject immediately found. It bristles with pointed and useful suggestions, which in many cases, might just turn the scale from failure to success. Its mechanical presentation is a feature worthy of mention. It is square cloth bound stamped in gold, printed upon India tint paper with Cheltenham type, with special marginal side headings in red. A dollar could not be better invested than in the purchase of this book.

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A TEXT-BOOK OF MEDICAL DIAGNOSIS. By James M. Anders, M.D., Ph.D. LL.D., and L. Napoleon Boston, A.M., M.D. The W. B. Saunders Co., Philadelphia, 1911. Price $7.50.

The appearance of a book of almost twelve hundred pages on Medical Diagnosis sheds a significant and gratifying light upon the importance which the subject of diagnosis has assumed of recent times. It is not by any means the only large book on diagnosis that has been launched in the last few years, showing that this branch of medical science and practice is attaining almost as wide and popular a place as treatment. An added significance in this direction is found in that fact that both the authors of the present work are men who for many years have been distinguished for their contributions to the literature of general theory and practice, each being the author of a well-known text-book on this phase of medicine. Messrs. Anders and Boston have done themselves proud in the work before us. It is a most careful and exhaustive exposition of modern diagnostics from the practical side, and is well worthy to take its place among standard text-books. Both the authors have brought to the task all of their ripe experience and keen observation, and have translated them into instructions and guidance for the fortunate reader. We cordially recommend the volume to our subscribers.

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PRACTICAL CYSTOSCOPY AND THE DIAGNOSIS OF SURGICAL DISEASES OF THE KIDNEYS AND URINARY BLADDER. By Paul M. Pilcher, M.D., Consulting Surgeon to the Eastern Long Island Hospital. Octavo of 398 pages, with 233 illustrations, 29 in colors. Philadelphia and London. W. B. Saunders Company, 1911. Cloth, $5.50 net.

Almost simultaneously with Squire's manual of cystoscopy comes this work of Dr. Pilcher, which is a little more pretentious in its scope and extends to the diagnostic considerations of kidneys and bladder. So far as we can see, from the rather cursory inspection we are able to give it, all that we said about Suier's book may well apply to the work now under review, with of course an additional word for the larger range covered by Dr. Pilcher. The author is a practical man, widely experienced in private and hospital work, and every page of his book reflects this practical knowledge. The growing importance of cystoscopic examination demands that every practitioner be thoroughly familiar with the technic of the method, and with the interpretation of its findings. Hence the value of the book to the general practitioner. The illustrations are in Saunders' best style, and demonstrate the ocular findings of the cystoscope in their natural colors—a most valuable item.

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SPIROCHAETES. By W. Cecil Bosanquet, M.D., Fellow of the Royal College of Physicians, London. Octavo of 152 pages, illustrated. Philadelphia and London. W. B. Saunders Company, 1911. Artistically bound, $2.50 net.

So far as we are aware, this is the first systematic attempt, in book form, to write a biography of these latest ad-

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ditions to the micro-organic and pathogenic family. They are an exceedingly interesting and significant group. Their position in the scale of living things, as the author points out in his preface, is as yet undecided. They seem to come in somewhere between the bacteria and the protozoa, with a leaning toward the former. Dr. Bosanquet has gathered together the observations and researches of different authorities on the morphology and behavior of the species, with a view of establishing, if possible, the features which characterize the genus; and has then proceeded to deal with the separate species thus described. The result of his labor, published in this low-priced and handy shape, ought to furnish a valuable contribution to the proper classification and signification of these remarkable organisms.

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A Hand Book For Medical Advertisers. Compiled and Published by Henry R. Harrower, M.D., 921 Schiller Building, Chicago, Ill.

This is a comprehensive little book of ready reference, giving data regarding the medical, dental, drug, and allied journals published in the United States and adjacent countries, together with sundry other information of interest to medical and drug advertisers, for the purpose of demonstrating to the advertiser the economy and advantages accruing from the purchase of advertising space in these journals. It certainly represents a great deal of work—much more than the ordinary advertiser is in the habit of bringing to his advertising campaign; seems to be very thorough; and, assuming that the information it contains is reliable, ought to be of immense value to those who have advertising to do to the medical and allied professions through their journals. It would surely appear to be worth its modest price to any advertiser.

**NERVE STORMS OF WOMEN.**

The nervous crises of women, which impair so seriously their happiness and usefulness, owe their origin, in the vast majority of cases, to those irregularities or suspensions of the generative functions which, as every physician knows, exercise so potent an influence upon the higher nerve centers. In these days of artificial living, ovarian and uterine disorders are much more frequent than formerly, and physicians are finding it necessary to devote their efforts to a clearer understanding of the functions peculiar to women, and to an intelligent and adequate relief of their troubles. Usually it is the nervous and mental disturbances which bring this class of patients to the physician's office, and he finds himself confronted with the necessity of giving prompt and effective relief to this phase of the condition. For this purpose Neurosine has proven a most efficient combination. The control of the mental and nervous manifestations must be followed by a thorough treatment of the underlying physical disorder, which will usually be found to consist in some interference with the menstrual function. To correct this, there is no more valuable remedy at the physician's command than Dioviburnia, which is a combination of well-chosen drugs having a specific corrective influence upon the ovarian and uterine tissues. Thus Neurosin and Dioviburnia together will bring the patient back to her normal health and vigor, the one controlling the nerve storms resulting from functional irregularities, the other correcting and removing the irregularities themselves, from which the nervous disturbance springs.

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# NOTES AND MISCELLANY.

### RELIABILITY.

The reliability and the extensive therapeutic application of Fellows' Syrup of Hypophosphites in medical practice are so well-known and generally acknowledged by the profession that manufacturers seem to have tacitly agreed that it is no longer necessary to extol its merits or to point out its indications in their advertising in the medical journals, and so have adopted the novel and very effective style of having the name of the preparation appear as the most conspicuous part of their journal advertising, as if to say to the physician, "Don't forget your old and ever reliable aid,—the one which has never failed you and which may be depended on in any emergency."

At the bottom of the advertisement they caution the physicians to reject worthless substitutes and preparations "just as good." It would seem as if this caution should hardly be needed, when all physicians know there is not a pharmaceutical house in the country that does not make an imitation of this old reliable preparation, and that many of them actually sell their stuff in bulk to druggists with the intention, and even with the recommendation, that it be substituted surreptitiously in prescriptions which call for the Fellows' Syrup. Yet there are some physicians who still ignore this fact, and continue to be imposed upon with substitutes for the Fellows product.

### QUININE WITHOUT EBRIETY.

When two such well-known drugs as antikamnia and quinine are offered to the profession it hardly seems necessary to indicate the special classes of affections which call for their use. Antikamnia is unquestionably a perfect substitute for morphine for internal administration. It has complete control over pain, while it is free from the undesirable after-effects of the alkaloid of opium. In cases of malarial fever, the combination of antikamnia and quinine should be given. For all malarial conditions, quinine is the best remedy we have. But, associated with this condition, there is always more or less pain, and antikamnia will remove these unpleasant symptoms and place the system in the best condition for the quinine to do its work. There are a number of ailments, not closely defined, which are due to the presence of malarial poison. All such conditions are greatly benefited by the use of "Antikamnia and Quinine Tablets." The antikamnia in these tablets not only relieves the pain, but prevents the ebriety or ringing sensation produced when quinine is administered alone. In headache (hemicrania), in the neuralgias occurring in anaemic patients who have malarial cachexia, and in a large number of affections more or less dependent upon this cachectic condition, the regular administration of these tablets is indicated.—*Medical and Surgical News.*

### "SEDATING A TURBULENT BRAIN."

When a physician remembers that neurosine is a well balanced formula, contains no Opium, Chloral, Morphine, or Cocaine, each fluid ounce representing 40 grains each of the chemically pure bromides of potassium, sodium and ammonium, one grain of the bromide of zinc, 32 grains of the extract of lupulus; 40 minims fluid extract cascara sagrada; .075 grains each of the extracts of hebane and belladonna; .60 grains of cannabis indica; .060 grains oil of bitter almonds and five per cent alcohol with

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aromatic elixirs, he will at once appreciate its excellence as an anodyne and soporific. Each constituent of Neurosine possessing positive therapeutic properties, lends aid to its congeners and contributes to make the whole the most efficient calming agent at the physicians' command. Whilst Neurosine is employed for a host of purposes and in a wide range of conditions, it may be said that its power to sedate a turbulent brain and to allay extreme nerve irritability, gives it distinctive qualities and raises it, head and shoulders over anything else in the same department of therapeutics. For procuring rest during typhoid or other fevers, or soothing a woman experiencing the nervous trials attendant upon her peculiar monthly function, Neurosine will give the best of results. Its palatibility and the ease with which it may be taken over long continued periods eminently qualifies Neurosine to take a leading role in the treatment of epilepsy and it is particularly recommended for this condition.

### FOR SUMMER HEALTH.

When the hot, sultry summertime comes and you're about played out—feeling tired and miserable from heat and excessive perspiration, get a box of Tyree's Antiseptic Powder and use in the bath as directed. It will refresh and revive you, eliminating all bodily odors and is especially good for sore, tired, sweaty feet. A valuable booklet entitled "The Nurse" and a liberal free sample of Tyree's Antiseptic Powder can be had by addressing J. S. Tyree, Washington, D. C. This Antiseptic Powder also relieves insect bites, sunburn, hives, poison oak and skin diseases. For sale at drug stores in 25 cent and $1 boxes, or sent direct upon receipt of price.

### IF THE STOMACH WERE A SACK.

If the stomach were a sack into which uncooked food and nauseous drugs might be thrown and be digested and absorbed into the system—then there could be no objection to plain crude cod liver oil. The stomach would use it just as it would the uncooked food. But since the stomach is not a sack, but happens to be a delicate organ which will resent harsh treatment, uncooked food, nauseous drugs and plain crude cod liver oil are not good for it and against them it rebels. Our common sense warns against uncooked food; deference to the patient's taste guards against the administration of disagreeable drugs, and the manufacturing chemist has made it possible to give cod liver oil in palatable form. Hagee's Cordial of the Extract of Cod Liver Oil Compound is the most efficient and palatable of the cod liver oil preparations and its great value as a tissue food has won for it wide use at the hands of physicians.

### MERCK'S MANUAL OF THE MATERIA MEDICA (FOURTH EDITION).

A Ready Reference Pocketbook for the Physician and Surgeon. Containing a comprehensive list of Chemicals with their synonyms, solubilities, physiological effects, therapeutic uses, doses, incompatibles, antidotes, etc.; a table of Therapeutic Indications, with interspersed paragraphs on Bedside Diagnosis, and a collection of prescription Formulas, beginning under the indication "Abortion" and ending with "Yellow Fever"; a Classification of Medicaments; and Miscellany, comprising Poisoning and Its Treatment; and an extensive Dose Table; a chapter on Urinalysis, and various tables, etc. (Merck & Co., 45 Park Place, New York. 1911. 493 pages. Sent on receipt of forwarding charges of 10 cents, in stamps, to physicians, or to students enrolled in any College of Medicine, in the United States.)



### INTESTINAL ANTISEPSIS.

The problem of intestinal antisepsis again besets you more acutely than at

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any other season of the year. You are often sorely puzzled in deciding upon what remedy you should actually prescribe for the many and varied conditions which call for such medication.

Most of the intestinal antiseptics are irritating, objectionable in taste, and toxic. To be of any value they have to be exhibited in large doses, and then they generally become gastro-intestinal irritants and the pathological condition is rendered even worse by a further complication.

In such conditions as infantile gastro-chronic, catarrhal, and tuburcular enteritis; in typhoid fever, chronic and subacute diarrhea; in fermentative dyspepsia, summer cholera, colitis, etc., a reliable, non-irritating and non-toxic antiseptic is obviously needed.

A remedy which can be safely recommended for this purpose is Thiocol Roche, for, unlike many other intestinal antiseptics, it does not irritate the most delicate stomach, and being freely soluble in water, its effectiveness is certain. Unlike all other intestinal antiseptics it can safely be pushed to the point of saturating the system with guaiacol. Its exhibition is followed by increased appetite and weight. It is not habit-forming, is non-toxic and palatable.

Thiocol may be safely administered to children, as it is never followed by any untoward results.

Drop a line to The Hoffmann-La Roche Chemical Works, 65 Fulton Street, New York, asking them for the literature.

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### $1,000.00 IN CASH PRIZES.

The Marvel Company, makers of the Whirling Spray Syringe, announce their intention to offer a series of valuable cash prizes for the best essays or articles upon the "Therapeutic Value of the Vaginal Douche." Not only will several physicians receive an amount of cash which is well worth the effort involved, but the entire profession will benefit, since it is the intention of the Marvel Company to publish many of the most interesting articles, thus supplying valuable information regarding a therapeutic measure which is of no slight importance.

The rules and conditions under which the competition will be held are absolutely fair and just.

The essays will be judged solely upon merit; the names of the writers will not be known by the judges.

Read their advertisement and make an effort to win a prize.

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### SUMMER CASES.

Conditions peculiar to the season now with us will present themselves for your consideration and a reference to the fact that Antiphlogistine has proven of particular service in Sunburn, Bee Stings, Insect Bites, Sprains, Bruises, etc., will offer you a ready and satisfactory dressing and procurable in all drug stores.

In those severe cases of Dermatitis, following undue exposure to the sun's ray, Antiphlogistine will quickly reduce the inflammation and the accompanying swelling and pain.

In all cases it should be applied thick and hot and well protected by ample covering. ❖ ❖ ❖

### IN NERVOUS EXCITEMENT.

The principal indications for Peacock's Bromides are, of course, Epilepsy, Uterine Congestion, Headache and all Neuroses. Being a safe and certain nerve sedative, it will be found a most valuable aid whenever the mental functions are overtaxed, producing insomnia. Peacock's Bromides does not compel sleep, like hypnotics, but by allaying the existing nervous excitement, whether due to mental strain, worry or anxiety, it promotes sleep in a normal manner. Unlike the effects from hypnotics, the patient awakens refreshed, with a clear head, and does not suffer from unpleasant sequelæ the following day.

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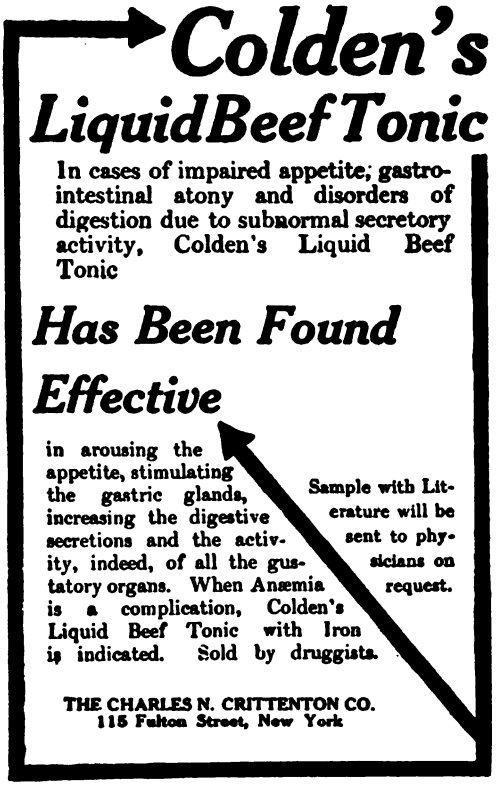
Colden's
Liquid Beef Tonic
In cases of impaired appetite, gastro-intestinal atony and disorders of digestion due to subnormal secretory activity, Colden's Liquid Beef Tonic
Has Been Found Effective
in arousing the appetite, stimulating the gastric glands, increasing the digestive secretions and the activity, indeed, of all the gustatory organs. When Anæmia is a complication, Colden's Liquid Beef Tonic with Iron is indicated. Sold by druggists.
Sample with Literature will be sent to physicians on request.
THE CHARLES N. CRITTENTON CO.
115 Fulton Street, New York


### A TRUE HEPATIC STIMULANT.

Chionia is a preparation of Chionanthus Virginica and possesses only the best therapeutic properties of that drug. It has been honored with a great number of testimonials from physicians of all schools and the consensus of opinion is that it is the most trustworthy hepatic stimulant, when employed persistently in properly selected cases. Physiologically it may be described as a gradual vasomotor stimulant to the bile ducts, and many authorities contend that its use will improve portal circulation and strengthen the lymphatics. Dr. Geo. Covert has aptly referred to it as a "bile persuader," and indeed this describes its action in a nutshell.

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### THE AFTER TREATMENT OF CATARRHAL COLDS, ETC.

The various colds, "grippes," and catarrhs, that afflict the respiratory mucous membranes during the winter months, are extremely likely to leave their traces upon the general systemic vitality, in the form of a greater or lesser degree of Anemia. This is especially true of those whose resistance is "below par," i. e., elderly people, young ill-nourished children, and weaklings from whatever cause. The constitutional after-treatment of respiratory disorders, among this class of patients, is usually more honored in the breach than in the observance. There can be no better routine practice than to order Pepto-Mangan (Gude) as a general tonic and reconstituent, especially when Anemia is apparent. This exceedingly pleasant and ferruginous reconstructive is so distinctly palatable as to render it generally acceptable to all patients, and is so entirely free from irritant properties as to insure its ready toleration without causing constipation or disturbance of digestion.

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### THE "CITY" ANEMIC.

The hard hum-drum city life, especially of those whose days are spent indoors, in offices, bending over desks, ledgers, and school books, is almost certain, sooner or later, to leave its traces upon the man, woman or child thus unfortunately situated. General sluggishness of metabolism, due to indoor confinement in a vitiated atmosphere, and lack of exercise, is followed by failing appetite and later by degenerative blood changes of anemic nature. While Pepto-Mangan (Gude) cannot, of course, remedy the cause of the anemia and general devitalization, it almost always assists materially in overcoming the anemic blood state, increases appetite and acts as a real tonic and general reconstructive. As Pepto-Mangan (Gude) is free from irritant effect upon digestion, it is readily borne and quickly absorbed and assimilated, and as it is non-astringent it does not cause or increase constipation.

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# The Medical Brief

A MONTHLY JOURNAL OF PRACTICAL MEDICINE.

Vol. XXXIX St. Louis, Mo., September, 1911. No. 9.

## EDITORIALS.

### THE CLINIC AS AN EDUCATIONAL AGENT.

IN AN article which we have abstracted elsewhere in this issue—it matters not by whom, or upon what particular subject, or from what journal, since these things have nothing to do with the point—the author, commenting upon the conclusions of a certain German clinician, throws doubt upon the soundness of this clinician's findings on the ground that he sees too many cases. The inference, of course, is that too many patients pass this man in a given time to permit of their all receiving that thorough and careful examination which is necessary to a scientific diagnosis. And undoubtedly there is a great deal of reasonableness in the objection. At all events, when the matter is considered from the point of view of its relation to medical education, whatever may be true of its influence upon the clinician himself, one cannot help admitting that a crowded, hurried clinic is hardly adapted to teaching methodical, painstaking diagnosis. Such a cloud of material can certainly do little more than dazzle the imagination of the average student or post-graduate, leaving no lasting or intelligent impression upon his mind, and serving to confuse rather than to discriminate between diagnostic differentiation.

On the other hand, there is a very general conviction prevalent that large clinics furnish the most valuable means of teaching practical medicine—the larger the better. And it must be confessed that this view of the matter has also its powerful arguments, most powerful and irresistible of which, perhaps, is the undeniable connection that exists between the large clinical facilities of European medical schools and their acknowledged teaching superiority. There is, in fact, no other ground on which to explain this superiority, for this is the only point in which European schools of medicine excel American. And, in spite of the critcism of the gentleman whose remarks we took as a text for this editorial, it is a fact that the German professors of clinical medicine do derive their authoritativeness from the multiplicity of cases which pass their eye and hand.

What, then, is the answer to the paradox? How are the two views of the matter to be reconciled? We believe the solution is to be found in a combination of both. We heartily agree with those who admonish against the dangers of the too large clinic as the only method of teaching practical medicine—although we are not disposed to think the American medical student stands in any great danger from this source. It is, we think, quite true that the exclusive use of large clinics is apt to induce a habit of scamping and generalizing. On the other hand, we are equally

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in agreement with those who hold that a multiplicity of cases is the only way to wide experience and familiarity with disease in any of its forms. The sight and study of two or three cases a year of any one form of disease will never make a practical clinician, no matter how thoroughly and painstakingly they may be gone over. The range of practical medicine is so wide that its field of rehearsal can hardly be made too extensive.

The irresistible conclusion is that there are two distinct and separate schemes of clinical demonstration, both of which call for equal attention in the student's curriculum. Unfortunately, neither of them is given the place that it ought to have in the American school of medicine. One is the plan which finds its highest expression, perhaps, in the English schools, namely, the bed-to-bed plan that is carried out in the English hospital schools, (whence comes the well-known English expression "walking the hospitals"), in which the student is brought face to face with actual sickness in the role of a bedside physician, and given both opportunity and instruction for the bedside handling of the individual case. The other is the distinctively German plan of public clinics, where hundreds of cases of the same general type are to be seen each day, and where the eye and other senses of the student may be made accustomed, from the very multiplicity of instances, to the manifestations about which he has learned in practical detail from his bedside study.

We do not wish to be understood as implying that these two plans of clinical instruction are peculiar, the one to England, the other to Germany. Both are of course followed out in both countries. But it is in the former country that the first method excels, in the latter that the second is supreme. In America, unfortunately, where we ought to have a splendid combination of the two, we have nothing but the faintest imitation of either. We have, indeed, almost abandoned the English bed-to-bed plan, and made a great palaver about general clinics, but the truth is we have not the clinics to justify our talk. What we need in this country, for the most effective teaching of practical medicine (and that is, after all, the only kind of medicine for which the public cares), is a universal hospital-college scheme, i. e., that every medical school shall own, or better still, be owned by, a hospital whose wards shall form the stamping-ground of the upper students; and second, a general system of municipal clinics under which the sick wards of the city or county should be properly distributed as clinical material among the legitimate schools of medicine.

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## THE LIMITATIONS OF PSYCHO-THERAPY.

THE employment of suggestion as a therapeutic agent, especially in those psychoses and neuroses which seem to lend themselves most peculiarly to this kind of treatment, is finding a very enthusiastic advocacy in many quarters; and, indeed, in the minds of some of its most ardent advocates there would seem to be no limit to its usefulness other than those which pertain to the capacity of the therapeutist. Given an operator who can wield the power of suggestion to an unlimited degree, and the benefits to be derived therefrom, according to these enthusiasts, are equally unlimited. In view of this rather misleading fanatacism it may not be out of place to call attention to one or two fundamental and inherent limitations which lie within this mode of therapy, automatically bounding the scope of its effectiveness.

It may be noted, for one thing, that those particular cases of psychosis or neurosis in which suggestion is supposed to find its greatest usefulness are usually cases

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in which the essential defect is one of will-power; and no amount of suggestion can ever awaken will-power. On the contrary, the very essence of the power of suggestion is to substitute one will for another, or at least to make the patient's will subordinate to the suggestion of the operator's—a principle which carries on the face of it an irreconcilable antagonism to the development of the patient's individual will. It may, in fact, be laid down as a law of suggestion, that the more completely the subject is brought under its influence the less will-power he has of his own; and a patient who actually started out with some degree of will-power would, after a prolonged and "successful" course of suggestion finish up by losing what little he had. Now it may be quite reasonable to suppose that a person's will, like his pulse or his muscles, may occasionally need helping over a crisis; and for that purpose a little suggestion is a capital thing. But to completely "influence" a subject, while it may establish a "habit", is utterly destructive of will-power, and defeats the very purpose for which it is employed. Exceptions, of course, are to be seen in those rare cases where the will-power is hopeless, and must be replaced by habit. But cases of this kind do not enter into the argument, save as exceptions which prove the rule.

What is, perhaps, a still more fundamental consideration—at least a much wider-reaching one—is the comparative inefficacy of suggestion itself to do the things required of it. It is not by any means the all-puissant spirit that its worshippers imagine. It falls short of the efficacy of the actual event or condition suggested, by just so much as an imitation always falls short of the real thing. Just as a joke repeated, never so cleverly or opportunely, never produces the same natural merriment as the joke which tumbles spontaneously on the heels of a train of experiences; just as the sequence of events reeled off a cinematograph does not have the same effect upon the senses as the actual transpiring of those events; because they are detached, so to speak, from their living connection with the reality of things; so the suggested states of mind in the psycho-therapeutic subject can never exercise the same influence that similar states of mind would exercise that arose naturally and spontaneously. And curiously enough, the more perfect we make the mechanism for producing the suggestive effect, the more unerringly the mind detects the false ring and resents it.

What these psycho-therapeutic enthusiasts seem to forget is that the principle of the sub-conscious mind works both ways. The teachings of psycho-therapy on this point are a trifle inconsistent. It is never weary of assuring us how vigilant and keen and unerring the sub-conscious mind is; how it takes note of events, keeps track of time, and senses impressions with far greater accuracy than the higher brain. Yet in the same breath it asks us to believe that this sub-conscious mind can be easily and wholesalely fooled by any and every kind of suggestion, regardless of any vital relation which that suggestion may or may not bear to the reality of things.

We are not attempting to discredit the power of suggestion; only to point out the common sense of the matter. We do thoroughly believe that much can be done by means of properly directed suggestion of the psycho-therapeutic kind, just as it can by suggestion of the ordinary sort. But every man knows that if he is to influence a customer, let us say, to buy an article by means of a certain line of demonstration, he stands a far better chance of being successful if he can so arrange it as to make the demonstration appear to fall naturally within the customer's mental routine, i. e., to give it a vital relation or continuity with his experience. For the instant the customer gets an inkling that the demonstration is being performed for the purpose of making him buy, he sub-consciously resents it, and the merchant has

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then this resentment to combat in addition to other obstacles. So it is with psychic suggestion. Unless the suggestion be skilfully and intelligently directed so as to synergize with the life-current of the subject's own thought and experience, and to set in motion, as far as possible, natural and spontaneous tides of mental activity, it will unquestionably stir sub-conscious resentment; which will do more harm than good.

Able and expert psycho-therapists know these truths, and understand the limitations of the agency. For this reason they make least claims and achieve greatest results. It is for the admonition of those who have not the means of checking the wild claims of extravagant fanatics that we have said what we have.

* * *

## OUR CRITICS.

> The editorials in the current *Medical Brief* on "The A. M. A. In Action at Los Angeles," and "The A. M. A. Going Into the Text-Book Business," illustrate again the propensity of mankind to ignore the originator of a movement, no matter how he toiled and suffered in season and out of season to place it before a world scarcely ready for it. Dr. G. Frank Lydston, no matter how we may differ as to whether he was "politic," literally forced upon the attention of the A. M. A. membership certain weaknesses of the institution that were not foreseen when the big society was reorganized. The very things the editor of the *Medical Brief* finds the courage at this time to inveigh against were first pointed out by Lydston; and it is remarkable that the very verbiage of the pamphlets issued by Lydston has been appropriated by the startlingly original editor of the *Brief*. In his pamphlet entitled "The Russianizing of the Medical Profession," the proposed text-book invasion, the domination of medical education, health boards and medical journalism was freely predicted. This is not the place to argue on the function of the A. M. A. to exercise control of these various fields, or whether the danger is imminent of placing autocratic power in the hands of a few. The fact is, this domination was predicted, and the attention of the membership drawn to the possibilities inherent therein by Lydston. His methods have been justly criticised, but he has certainly given an impetus to reform.

THUS the editor of the *Lancet-Clinic* in stern and righteous indignation. Lordy, who would have dreamed we were bringing down upon our devoted heads such vials of contumely by our innocent and modest comment upon current events? Why confine the application of the accusation to Lydston? Why not charge us with plagiarizing Thomas Jefferson, or appropriating Lord Macaulay, or purloining from David Hume,—all of whom, and thousands of others, have "forced upon the attention of institutions certain weaknesses that were not foreseen when they were organized?"

The charge is puerile and gratuitous. No one in medical journalism has greater respect for Lydston and his work than the *Medical Brief*, and none has given him more loyal and outspoken support at a time when journals like the *Lancet-Clinic* were afraid to declare themselves. It may be a propensity of mankind, in approving a successful movement, to "ignore the originator who toiled and suffered to place it before a world scarcely ready for it"; but it is a great deal more characteristic of mankind, and of journal-kind too, to allow such a man to toil and suffer alone until the movement gives signs of success, and then to wax eloquent in his laudation.

By-the-way—er—did anyone chance to see an article entitled "The A. M. A. and the Publishing Business" in the July 15 issue of the *Lancet-Clinic?* And did anyone happen to find in that article any reference to Lydston and his great work?

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# Pneumonitis.*

By Robert L. Hammond, M. D., Maryland.

DR. HAMMOND is not a therapeutic nihilist—on the contrary, quite the reverse. His article is a powerful plea for the vigorous and intelligent treatment of this dreaded disease, in a methodical fashion, by measures impelling the advent of the "crisis." In his system of therapeusis, wetting and douching the extremities, and fanning, to effect the rapid radiation of heat is a prominent adjunct of the treatment. Like all men who have faith in therapeutic measures, the author has an intelligent and broad understanding of what constitutes therapeutics. We present his article with a great deal of pleasure, as being a positive, practical, and helpful contribution to this important subject.

"Pneumonitis" as its nomenclature signifies is an inflammation of the lungs. In a descriptive sense, it is an acute sthenic or asthenic fever, attended by an exudate, "croupous" or "catarrhal" in character, into the vesicles, bronchioles and parenehyma of the lungs, with a "natural" tendency to terminate in a distinct "crisis." The substitles under which its pathology and treatment are studied are "croupous pneumonitis," named from the character of its exudate; and "catarrhal bronchopneumonitis" named from the constituent of its exudate, and the way in which it invades the lung tissue.

"Croupous pneumonitis" invades with its exudate the air-cells, of a lobe or lobes, it is common to "all ages" and comprises about seven-tenths of all the forms reported.

"Catarrhal bronchonitis" invades first the bronchioles, then the vesicles and interstitial tissue of both lungs with its catarrhal or muco-purulent exudate, it is *"mostly confined to children"* and embraces about three-tenths of all the cases reported.

The great mortality attending this disease at present make its study one of the most important within the realm of medicine.

Its causes are multiple, next to taking cold, a predisposition to it is the most frequent.

It is a peculiarity of this disease that at the time of a "normal crisis" the temperature is liable to become "subnormal' and this condition may occur and a state of collapse may supervene when positive antipyretic measures have been omitted altogether. This unfortunate circumstance was common in countries where "quinia" was used in unreasonable doses, and the "cold bath" was improvidently employed.°

It was common everywhere when the "coal tar derivatives" were used in positive doses.

The treatment here outlined is conservative, it is simply a peaceful invasion of the domain of nature, a clasping of the outstretched hands and a *mutual declaration of dependence in times of dire distress.*

The preliminary purgation is best accomplished by a single dose of 10 or 30 grains of calomel triturated with one grain of sodium salicylate, assisted in four hours with a three pint slyster of warm salt water,—from one to two teaspoonfuls of chloride sodium to each pint of water should be used, according to the amount of intestinal stimulation required. Lavage of the colon, with the foregoing solution, should be practised once daily, during the continuance of the case, unless specifically contraindicated, then sterilized water alone should be used.

*The term "pneumonitis" is employed, by the writer, rather than pneumonia, because it more definitely implies the presence also of a localized inflammatory action.

°See Ziemssen's Cyclopaedia of Medicine, Vol. V.. Fol. 165-166.

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The salt supplies that chemical to the system, which an analysis of the urine indicates is lacking, and the water supplies the system with that element without burdening the stomach with it, it will soothe the stomach and intestinal irritation, lower the temperature, and materially modify the progress of the disease.

If the stomach is irritable give "ice" and apply a "sinapism" to the epigastrium. If chill is present use heating agents internally and externally, that the blood may be gotten back to the surface immediately; when reaction occurs, with augmentation of fever, commence at once with

**Ice-Water and Fanning**

"ice-water" to the entire head and back of neck, and "fan," the thoroughly "moistened" or "douched" parts, vigorously and constantly (avoid the ears), wet the hands and wrists, get the water between the fingers, and then lay outside of the cover to cool; if fever is excessive wet the feet also.

The room should be large and kept as free from excitement as possible and at about 70° Fahr. It should be ventilated by admitting air from an adjoining room to which pure, fresh air has been daily admitted; at the time the "crisis" or during the applications of the heating agents the temperature of the room should be not less than 80° or 85°. (If the outdoor temperature is favorable, 80°, throw open the windows.)

The *"fresh air advocates"* declare it to be a specific in this disease.

If this is true, why the alarming death rate? And why are the number of cases increasing rather than diminishing?

The writer employed "cold air" in the treatment of scarlatina 28 years ago. It "relieved" as it will any form of dyspnœa. The scarlet hue of the eruption soon paled, the dyspnœa diminished and the temperature was promptly lowered. He thought that he had discovered a specific, but soon found that more trouble from sequelae resulted than he had had to contend with in the primary disease. The patients became subject to various forms of kidney trouble; had waxy kidney, evidenced by the peculiar waxlike color—of the skin; and parenchymatous degeneration, with uraemic convulsions. A low grade of secondary fever, with gastric and intestinal disturbances, often complicated and retarded convalescence. Again "catarrhal bronchopneumonitis," as a terminal affection, developed with its train of neurasthenia. All these troubles were found to be due to the patient taking cold from the exposure at the "critical time" of the defervescence of the fever which occurred about the fourth or fifth day. It was found to be a dangerous experiment to trust all classes of cases (mild, severe and malignant), INDISCRIMINATELY, to the effect that the variable meteoric condition of the "out-door air "has upon the rapid and imperfect metabolic processes which are going on within the assailed organism, it was found that only the very malignant cases, those as red as a boiled lobster, with a high temperature, and panting respiration should be treated with "fresh air" and then only when the services of a trustful and competent nurse could be obtained. The experience with "fresh air" in scarlet fever has kept the experiment from being repeated in "pneumonitis."

The cause of the present increased prevalence and death rate in this disease, is largely due to the intemperate and inconsistent practice of sweltering in overheated, and crowded, day apartments, workshops, theaters, churches, etc., and the violent change, from there, to rooms with "wide open windows "at night, and chilling temperature, as sleeping apartments; the exposure attending fashionable attire, the degeneration produced by luxurious living; the scientific proclamations heard at times that colds

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as well as "pneumonitis" are caused only by germs; and that the indulgence in alcoholic liquors is condusive to health and longevity. The preaching and practicing of such doctrines have a demoralizing effect upon the habits of the people, especially the careless and indigent, causing them to neglect even the ordinary precautions against taking cold, and to become prodigal of those things which contribute towards constructing and maintaining a vigorous organism. (The writer trusts that the reader will allow this etiological digression.)

Several years ago I was called to see a patient dying with "pneumonitis" on a cold, rainy day in April, he was lying with his bare breast exposed to the depressing, aggravating, "cool, damp, fresh air" which was admitted through the open windows (the air was not sufficiently cold to effect a material reduction of his temperature, and his face was alternately congested, blood red and mottled), *"he was begging for more air."* I gave him a hypodermic of morphia and atropia, "wet" his parched brow with "ice water," covered his chest and commenced *"fanning"* him. He was at once relieved and said, "If this had been done sooner I might have recovered; you can put the windows now, Mamma will take cold." She did take cold and has suffered from bronchitis ever since.

The "fanning"' has a more decided effect in lowering the temperature than the "ice cap." The philosophy of it is that the water is more quickly evaporated, and the heat, as fast as it comes to the surface, is rapidly radiated and carried away, while the ice simply substitutes its cold for that of the heat in the circumscribed area with which it is in contact. Its effects, however, are too rapid for the purpose of reducing the "thoraic and abdominal temperature," and the local effect of the "ice cap" 'to the præcordium is preferable for that purpose.

The marked relief obtained by this method of abstracting heat is apparent, not only in the tranquilizing effect of it, but the pulse diminishes in frequency and increases in tone and fullness, and continues thus as long as it is practiced, and from a prognostic standpoint the case, at once, is taken well in hand and the chances for recovery are brightened. More good can be accomplished by the proper constant, vigorous use of the "FAN" than if all the "fresh air" of the firmament is allowed to course the patients bed chamber uncontrolled and undirected.

"Pneumonitis", when uncomplicated, is a short lived disease, running its course and ending in recovery—"by crisis"—in from *"one to five days."* WE therefore need not fear the highest temperature, *we can promptly control it,* but we must stop or restrain the inflammatory process, whether the temperature be low or high, *by a conjoined, systematic, constitutional, internal and external antiphlogistic treatment.*

The diet is of supreme importance (predigested foods of the highest degree of excellence should alone be given until convalescence is established), one or two tablespoonfuls of liquid peptonoids of beef, milk and gluten, should be given, regularly, with cracked ice and sugar, if desired, every two hours, or an equivalent quantity of "meat juice." A glass of lemonade made from the perfect fruit is very refreshing, and may be given three times daily, the expressed juice from a good ripe orange, sweatened if desired, may be taken in lieu of the lemonade. Milk should be posistively avoided, unless the above forms of nourishment cannot be obtained. If compelled to use it, the quality should be first class, fresh from the clean udder of a healthy cow and free from acidity. Then three or four ounces, with the addition of one or two tablespoonfuls of sterilized lime water, may be given every two hours.

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*Cracked ice* SHOULD BE CONSUMED VERY FREELY, and if sufficient water for the needs of the system is supplied in this form, sickness of the stomach will be prevented and nourishment will be consumed in sufficient quantity to meet the necessities of the case at critical times.

Very large doses of medicines should be avoided, particularly those having a depressing effect, as their sudden withdrawal, which is imperative at the time of the "crisis", is apt to be followed by a recrudescence of the fever.

Sodium salicylate in five or ten grain doses, combined with acetanilide one or two grains, is a safe and valuable antiseptic, antipyretic, analgesic and calmative agent, its potency is much enhanced by the combination as represented in the following formula, No. 1, which is designated thus to facilitate reference to it:

No. 1.

Sodii salicylas, pure.....gr. v
Acetinilde, pure.....gr. i
Quiniae sulph, pure.....gr. ss vel. gr. ii
Tinct. digitalis, pure, 1890.....m. ii
Tinct. aconit. rad., pure, 1890.....m. ¼
Hydrarg. chlor. mit., pure.....gr. 1/20
Ipecacuanhae fld. ext., pure.....gr. 1/20
Strychniae sulph., pure.....gr. 1/200
Mentholi, pure.....gr. 1/50
Methyl salicylat., pure.....gr. 1/50
Moschi (Chinese), pure.....gr. 1/200

—M. ft. C. T. No. 1. Signa. One or two every two hours, dissolved in a teaspoonful of sterilized water, with cracked ice, and sugar if desired. These doses rarely need to be increased or diminished.

Severe cases should take two of these tablets every two hours, those of milder type need take one and a half.

In all cases as soon as the "crisis" occurs the dose should be reduced, or the intervals lengthened, and as soon as the "crisis" is known to be firmly established, all medicines, cold drinks and cold applications should be abandoned and hot drinks and broths should be substituted for them and continued throughout convalescence.

*The great majority of the cases, if seen early, will come to a "crisis" during the stage of congestion,* i. e., within twenty-four hours after prodromal symptoms have manifested themselves, *and no exudate will have occurred.*

**Ice Cap.**

But if the case is malignant, or fully developed, one in which an exudate is occurring, or has occurred, then it will be necessary to supplement the measures that have been employed by applying a large well filled "ice cap" to the præcordium and lower portion of the thorax, press the air out so that it will hug the parts closely.

Now the temperature must be taken every hour or half hour from the bowel, provided the patient can not be trusted to hold the thermometer in the mouth. Inspect the parts and anoint the opening, with vaseline, before each insertion of a tested instrument.

Never omit at this stage of the case to give morphia, gr. ⅛, and atropia, gr. 1/200 (combined with strychnia, gr. 1/40 to 1/30, in addition to the 1/200 grain which formula No. 1 contains. This combination should always be used, especially when circulatory relaxation or weakness is present. It will help prevent retention of urine, which is apt to follow the exhibition of morphia in potent doses, and it is the best universal tonic and stimulant which we possess). This combination should be employed to prevent any liability to shock which the application of the "ice" might occasion. It should be continued, as occasion may require, for the relief of dyspnœa, pain, cough, restlessness and nausea, between hours for formula No. 1.

As soon as the temperature begins to fall rapidly and decidedly, place a linen cloth under the "ice cap," and when the temperature has reached 98° or 96° Fahr., remove the "ice."

Watch the temperature and if it attempts to rise above the normal, immediately reapply the "ice." If after "*sev-*

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*eral hours"* the temperature refuses to again fall to the normal, remove the "ice."

**Cantharidal Blister.**

Rub the surface upon which the "ice" rested thoroughly with turpentine. Sprinkle the surface of the blister also with it and apply a large, strong "CANTHARIDAL BLISTER" to the pr/cordium and lower region of the thorax. Cover it and the entire chest with a well made linseed meal poultice, as hot as can be borne. Bind the whole firmly to its position. Let it remain on 10 or 12 hours. The poultice will materially help to bring on the "crisis" and establish "resolution." After removing the "blister" clip the vesicles and reapply a *well oiled* poultice, changing it every third hour, for twenty-four hours, then do away with the poultice and apply a *very heavy coat of antiseptic oxide zinc ointment,* once daily, for two days. The "blister" will promptly impel the advent of the "crisis," within the time it takes to draw, and the ointment will rapidly heal the blistered surface.

**Subnormal Temperature.**

If "subnormal temperature" should occur and it is not attended by bad symptoms, nothing special need be done to restore the temperature to the normal—the author has seen the temperature remain at 90° Fahr. for twelve hours during the "crisis" without any bad symptoms developing. All medicine and cold applications were stopped and warm drinks and foods were substituted for the cold. No heating applications were applied. The patient made an uninterrupted recovery, a tested thermometer registered within twenty-four hours a normal temperature.

*For the above condition simply stop all medicines and cold applications and "ice," internally, and give hot beef broth, free from fat, warm beef juice, hot coffee or tea, or hot milk with lime water.*

**Collapse.**

But if "collapse" threatens or occurs, in addition to the above internal heating agents, local hot applications must at once be begun, combined with the very best stimulants which we possess. Several ounces of hot whisky or brandy toddy, served with nutmeg, should be given; or atropia, gr. 1/200, or 1/100, alone or combined with strychnia sulphate, gr. 1/30, or camphor, gr. ½, or I dissolved in sterilized olive oil; or trinitrine, gr. 1100 to 1/50; the last four should preferably be given hypodermically (the latter method of exhibiting medicines should only be resorted to in times of emergency); OR the following diffusible heart stimulant in nervous subjects, comp. spts. æther 31, fld. ext. valerian 3½ may be given. Either of these stimulants, which are accessible, should be used to meet the exigencies of the case in hand.

*The patient should be rubbed dry with warm, soft flannel cloths as often as sweating occurs. This will materially help to revive the fagging powers.*

**Moist Cases.**

If the case is a moist one, i. e., attended by "profuse universal sweating," often "FANNING" the sufferer will be sufficient to restrain the temperature, together with the application of hot or cold water to the extremities. "Ice" to the præcordium should be omitted in such cases, unless the surface subsequently should become hot and dry, and the fever increase, then the application of the ice to the præcordium, even in this class of cases, should be faithfully tried.

*In all moist cases,* while the entire surface is bathed in perspiration, *if the case occurs at a time of extremely low temperature,* reliance should be placed in *"BLISTERS"* to establish the "crisis."

**Asthenic and Adynamic Conditions.**

These types or conditions make up the majority of the fatal cases, with them

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the temperature is low and fluctuating, often not more than 98°-100°, or but a trifle above these figures.

A careful study of this disease reveals its "neurotic nature." Add to this individual idiosyncrasies and we have a complicated condition to study and treat.

*Those who have their attention fixed upon high temperature alone, and neglect the danger signals of the low, will never be very successful in the treatment of this disease.*

Symptoms and signs are often unreliable indicators of the intensity of the morbid process going on in the system and lungs in this disease.

A very small patch of "croupous pneumonitis", or a limited area of "catarrhal bronchopneumonitis" will often exhibit urgent symptoms. On the other hand, an extensive portion of lung tissue may be involved and attended by a general lethargy of the symptoms, which effectually masks the gravity of the case, even in those of robust constitution.

Again, the nervous individual will complain, and justly, too, of intense suffering at the very onset, because of the severity of the congestion and inflammation raging within, until universal toxæmia, or a gangrenous septicæmia through autoinfection lulls the system into partial insensibility, then the temperature, respiration, and even the pulse, may beguile us into a sense of false security. In these conditions, or in cases of profound shock, while the devastation within goes on apace and before we are aroused to the true pathological status of the case, it is beyond control.

Why is it that a *low temperature* is harder to manage and subdue than a high one? Space will not admit of a complete answer to this question, but an explanation sufficient for the purpose of making clear the reason why special efforts are instituted for the relief of this particular condition will be found in the fact that the entire organism is nearer death, and when the somatic death process is near at hand, or actually begun, some of the most powerful poisons and chemicals will often fail to hasten death, or produce their usual effects upon animal life. Then blisters will fail to draw, emetics to vomit, ice to chill, heat to restore the temperature, and even the blood to flow from fresh made wounds.

"Sthenic cases" may from neglect, bad attention or errors, become "ASTHENIC or ADYNAMIC", and it is this latter class of cases which are increasing the death rate so alarmingly.

*We look upon a patient, and wonder why, despite the presence of a low temperature, slight acceleration of breathing, with, a weak pulse but not a palpitating heart, slight nausea and an occasional effort to vomit, a hippocratic countenance, listless eyes, weariness and tossing of the head and limbs, should refuse all medicines, attention and nourishment, and die in a condition of profound asthenia or shock, but such are the conditions and results which confront us at the bedside.*

IN SUCH AN EXTREMITY, NO MATTER WHAT THE TEMPERATURE MAY BE, REMOVE ALL THE CLOTHING FROM THE PATIENT, PLACE HIM OR HER BETWEEN WARMED RUBBER SHEETING, PLACE HOT WATER BAGS UNDER THE COVER TO RAISE AND KEEP THE TEMPERATURE UNIFORM, AND APPLY "FLANNEL CLOTHS" RUNG OUT OF WATER AS HOT AS CAN BE BORNE TO THE ENTIRE SURFACE.

*Do not under any circumstances allow the patient to rise or throw off the cover. Make all these applications under the cover, and before commencing these stimulating fomentations, give hypodermically morphia, gr. ⅛, atropia, gr. 1/200, strychnia, gr. 1/30. This will in time bring the patient out of the condition of shock. When the pulst has revived and the general symptoms have improved, "continue busy." Remove the*

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*wet packs and hot water bags if you think prudent to do so. Place the patient between hot blankets and rub the entire surface gently, but thoroughly, with dry flannel cloths until perfectly dry and a firm reaction has occurred.*

**The Ice Cap in Asthenic Conditions.**

Now, if the case after being revived does not continue to improve and an exacerbation of the symptoms should occur an "ice cap" should be applied to the præcordium until a reaction occurs in the form of a more or less pronounced "crisis." Use the thermometer constantly to note the effect of the "ice," and use the same general caution which has been advised in the management of "sthenic cases."

**The Cantharidal Blister in Asthenic Conditions.**

If after the temperature has reached the normal, it should threaten to rise or the general condition indicates that a "true crisis" has not occurred, after the ice has been removed, apply a large, strong "cantharidal blister." Moisten its surface and the surface of the præcordium and lower portion of the thorax to which it is to be applied with turpentine. Apply over it and the entire chest a linseed meal poultice. Bandage the whole securely to its position, and within the time required for the blister to draw, ten or twelve hours, the "crisis" will be firmly established. Treat the blistered surface as recommended in the management of sthenic cases.

If the patient should firmly object to the use of the ice the blister can be applied first, or vice versa, without waiting to bring about a reaction with the ice. The use of either, or both, ice and blisters, should be firmly insisted upon, and should always be preceded by a dose of morphia and atropia and strychnia, and this combination should be continued, if for no other reason but to prevent the possible shock of the application of the "ice" or the irritation produced by the "blister."

It has been said that ("there is evidence to show that fever within moderate bounds may be an effort on the part of the organism to protect itself from infecting germs") and ("if the temperature does not exceed 102.5°—1003° antipyretic measures need not be instituted"). These same authors appear to have no system or method in their antipyretic treatment. The fallacy of a haphazard application of either *medicine, ice or blisters for the relief of "hyperthermia only"* is apparent.

We again assert that the temperature alone does not kill, and that it is often a misleading symptom, we are all aware, but it is the pathological process or the peculiarities of the individual constitution or both combined which carries the patient off.

The thermometer should be used simply to note the effect of the antipyretic measures employed.

The medical and local antipyretic agents should be carefully and systematically applied with the definite object in view of neither depressing the constitution or the temperature beyond that which is essential to re-establish the normal functions, and a "permanent crisis," and by *these measures relieve suffering and save the life of the patient.*

No physician or nurse can do this without painstaking labor.

*THE PATIENT ALONE SHOULD,* if possible, *BE RESTING AND SLEEPING,* while this work is going on.

Sufficient morphia and atropia (combined with enough strychnia, to help stimulate the heart, in addition to that which formula No. 1 contains, the amount required will be about the one-thirtieth of a grain) should be given to secure the needed rest.

Again it should be emphasized that "the proper food in the proper quantity and quality, as well as drugs, fanning, cold water, ice, and blisters, are indispensible for the comfort and safety of the patient.

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And they should be used as the skillful horseman uses the best of food, reins and lash, and hopples to control, guide and get the very best energy and action out of the steed he is developing, and that he supplements the intelligent use of the reins and the hopples—("alternate hot and cold applications"), with the last ("the biting but never failing stimulant when used at the proper time, in the proper strength, *the old fashioned rod of correction* the "contharidal blister)—when he wishes to make certain the result of a close and doubtful finish.

**Addenda.**

*CHILDREN*—The foregoing treatment is equally applicable to children of any age; but very young infants (those under six months old) should be "gently fanned" until they become accustomed to the current, either hot or cold water, as found expedient, may be applied to their extremities. Warming applications in the form of "hot wet packs," or preferably a well made "linseed meal poultice," with a teaspoonful of good stickney mustard thoroughly incorporated, until redness of the surface is produced, may be applied, and changed every third hour, to the præcordium and thorax, in lieu of the ice, especially in very cold weather.

But if the case does not improve within four or five days an "ice cap" not too heavy should be applied, "cautiously," and it should be followed with a "blister," if necessary.

CHILDREN stand relatively much larger doses of medicine than adults, particularly calomel, quinia and salicylate phenol. They are easily overdosed with morphia, atropia, acetanilide, strychnia, and salicylate soda.

*The dose of formula No. 1 for children should be based upon the maximum adult dose.*

The following formula, No. 2, may be substituted for formula No. 1 if a change at any time may be deemed necessary:

No. 2.

Phenol salicylat., pure.....gr.vi
Quiniae sulph., pure.....gr. i
Acetanilide, pure.....gr. i
Hydrarg. chlor. mit., pure, gr. 1/10 vel gr. 1/20
Ipecacuanhae pulv., pure.....gr. 1/20

—M. ft. pulv. No. 1. Signa.—As a dose for a child of 10 or 12 years, every two hours, in aromatic elixir licorice, with ice and glycerine, making in all a teaspoonful. Other children in proportion to age.

Adults may take double the above quantity, the amount of calomel and ipecac remaining the same.

Morphia, atropia, strychnia and digitalis can be given with this formula when necessary.

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For pain, restlessness, insomnia, delirium, dyspnœa, anasarca and violent cough, give morphia and atropia, combined, with strychnia.

For circulatory weakness; dititalis and strychnia.

For subnormal temperature; see treatment.

For collapse; see treatment.

For convulsions, if threatened, give an occasional dose of bromide.

For eclampsia give chloroform by inhalation, if patient can swallow, give a single large dose of calomel, gr. 10—30. If convulsions recur, give to an adult chloral hydrat, gr. 30, by enema, and repeat inhalation of chloroform.

For coma, GIVE a dose or two of atropia, and apply blisters to the inside of ankles, or nape of neck, or both.

For vomiting GIVE ice internally and apply it or a blister locally to the præcordium if other remedies fail to relieve. CONFINE PATIENT STRICTLY to PREDIGESTED food. WITHHOLD WATER UNTIL VOMITING CEASES.

For TYMPANITIES, GIVE quinia sulph., gr. 10, glycerine 31, aque fervida 38 M. ft. enem. Signa.—As an enema night and morning as far re-

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moved from salt water irrigation as possible. Half of this can be used for a child 6 to 12 years old.

For retention of urine, catheterize with a well oiled instrument, to which a long rubber tube is attached. Children of either sex and age can be easily cathererized, but it is seldom necessary. If retention is prolonged over twenty-four hours catheterization should be performed at once.

Inspect the parts of either sex, let females lie across a bed, on the side, with limbs drawn up—avoid unnecessary exposure.

Never allow an ill case to strain at urinating. The writer has seen the "crisis" completely annihilated, and the patient die from this cause, intense pain attacked the chest, liver, pancreas and spleen, relapse of the temperature immediately occurred, and it could not again be reduced.

For effusion, from pleuritis—Will rapidly become absorbed, apply "a *thick close fitting flannel jacket*" or bandage, as a sweater, around the entire chest and abdomen. Let it remain on for several months, in cold, damp weather longer. If marked dyspnœa developes call in a competent surgeon.

For summer cases—If the disease should occur in summer and the outdoor temperature is high, place the patient between "rubber sheets" and envelop the entire chest and abdomen in a *"four double* muslin or linen *sheet"* thoroughly wet with water, the temperature of which should be 60° Fahr. This wet pack should be renewed every half hour at least until the "crisis" arrives, by re-immersing it in the water, *or by douching it,* while on the patient, with water. Use the same caution in its employment as is necessary while making the ice application, *and fan gently,* while it is applied.

For convalescence—Return to upright position and solid food should in all cases be very gradual (particularly so in the weak and aged). They should on no account be allowed at any time to raise themselves by their own efforts. Allow plenty of nourishing and easy digested food, and hot drinks, coffee, etc.

For feeding-mug, bedchamber and urinal—The use of these important articles should be firmly insisted upon and the patient will soon appreciate their great value.

For *THE BEDROBE*—A loose fitting garment which can be buttoned its entire length in front should be the only clothes worn until after the "crisis" has arrived and convalescence has been established; the convenience of such a garment is apparent.

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## BISMUTH AND OPIUM FOR CHILDREN

The *Jour. A. M. A.* for June 10th says the deodorized tincture is the best preparation of opium for children and gives the following prescription as a favorite one for use in enteritis and summer diarrhea:

Bismuth subnitrate.....3ij
Fresh mucilage of acacia.....3j
Deodorized tinc. of opium.....mxviij
Cinnamon water, to make.....3iv

M. Sig.: Teaspoonful in water every two hours; shake.

Sometimes the bismuth subnitrate gives rise to irritation and nitrate poisoning and for this reason the subcarbonate is generally preferred. Perhaps it is not good pharmacologics to put the insoluble bismuth into a solution that requires shaking; it may, therefore, be given alone in a teaspoonful of milk. Phenyl salicylate may, however, be given along with it, e. g.:

Bismuth subcarbonate.....3jss

Fac chartulas, No. 20. Sig.: One powder every two hours.

Bismuth subcarbonate.....3jss
Phenyl salicylate.....grs. viij

M. et fac chartulas No. 10. Sig.: One powder every two hours.

It is much better to order the deodorized tincture of opium alone and administer a drop or more, as deemed necessary, every three or four hours.

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# Ovarian Extracts.

By J. A. Burnett, M. D., Marble City, Okla.

OVARIAN extract has been in the hands of the profession for a number of years; yet it is doubtful if the practicing physician has more than the vaguest and most generic understanding of its therapeutic value and limitations. Dr. Burnett has collated, and here presents, some exceedingly interesting and useful data upon the subject from every conceivable standpoint. He deals with the biology of ovarian extract, its toxic properties, its preparation, its physiologic effects, and its therapeutic uses, and he makes a plea for a more extended study and employment of it as a remedy in appropriate cases.

Various animal extracts have been used for a number of years and with good results in many cases. The five most important glandular extracts are probably (1) suprarenal capsule, (2) thyroid gland, (3) ovarian, (4) orchic and (5) spleen. There is no doubt but what the products of the suprarenal capsule called epinephrin are the most important and useful remedy of all animal extracts and used most often. The thyroid is likely the one used most next to the epinephrin preparations, and the rest, as I have given them in rotation. Dr. W. H. Morley of Detroit, Mich., says: "It has been noted, however, by many investigators, that ovarian extract is poisonous to the male, to the pregnant female, and causes certain metabolic changes that appear in the urine. These objective symptoms have been made use of in animal experiments." One observer noted that ovarian extract was less toxic for normal females than for normal males, and that it was as toxic for pregnant females as for males, and that it was toxic for castrated females and young females. It would be of interest to know the result of ovarian extract in castrated males. There has been quite a difference in reports of cases where ovarian extract has been used in amenorrhœa, dysmenorrhœa, chlorosis and menorrhagia. Possibly some of these differences account for the condition of the patient and the preparation used. It would not be good practice to prescribe one remedy in all conditions of amenorrhœa, dysmenorrhœa, cholorosis and menorrhagia.

Some claim that ovarian extract has no beneficial results in natural menapause, but is of value in menapause brought on by castration. In speaking of the failures of ovarian extracts Dr. Morley says:

"A most important fact and one that I hope you will keep firmly fixed in your minds is that in the use of any extract of whatever organ the extract should be carefully and properly prepared. That many of the reported failures are due to a poorly prepared extract I am most firmly convinced. The glandular tissues are most delicate and require the most careful handling I have known of fresh ovaries dessicated in a bake-oven grounded into powder and this so-called powdered ovarian extract used in the treatment of disorders of artificial menapause. The same amount of saw-dust would produce as good results. Extremes of heat and cold concentrated chemicals exposure to air, etc., will soon render glandular tissue per se inert. Only careful preparation and preservation will produce an active ideal physiological extract."

Potter has the following to say concerning ovarian extract:

"The substance of the ovaries has been administered with some benefit in the nervous manifestations and pathological conditions which occur when the ovarian functions are partially or wholly arrested

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as in cirrhosis or malignant disease, or after the operation of ovariotomy. It is said to be a serviceably remedy in cases of depression or other mental disturbances coincident with the climacteric to relieve ovarian congestion and neuralgia and to be remarkably efficient in the treatment of delayed or scanty menstruation."

After castration in women there are often a number of symptoms which affect the nervous system which can be relieved with ovarian extract. R. Mond was the first to investigate this later. Chrobak, Jayle, Grafl, Mainzer, Landau, Martin, Bodon, Touvenaint, Hirschberg, Muret, Leissac and Tambroni administered dried ovarian substance or ovarian extract to relieve all the symptoms of sympathetic neurosis occurring at the climacterium as well as the very troublesome giddiness flushing (ardor fugax) palpitation, nightmare, loss of memory, insomnia, etc. H. Senator, S. Fosberg, Jacobs, L. Seeligmann, R. Peters, A. Alessandro and F. Matonica have all decided that ovarian extract has gained for itself a permanent place in the materia medica.

P. Dalche considers ovarian treatment of particular value when the ovarial insufficiency with its accompanying symptoms such as vasomotor disturbances, dyspepsia, nervous symptoms, etc., is due not to sclerosis intoxications and infective diseases, but to an inherited abnormality of the ovaries.

One writer states:

"Charrin and Guillemonot have shown further that ovarian extract is able to improve nutrition retarded and disturbed owing to pregnancy. This leads to a new support to the theory of an internal secretion of certain glands as we are no doubt justified in assuming that in pregnancy the reduced metabolism is due to the diminished activity of the ovaries which may be said to be in a somnolent condition."

Ovarian extract has been used in cases of menstrual epilepsy. Good results have followed its use in heamophitia. It is of value in insomnia, headache, depression and pains in the back and limbs when associated with ovarian and uterine diseases. There are various diseased conditions in which ovarian extract can be used in with good results.

It is a remedy that deserves more attention as well as most all other of the animal extracts.

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## THE POOR BABY IN THE WINTER TIME.

Imagine, exclaims the *Dietetic and Hygienic Gazette,* the great army of babies seen during the summer time to crowd up every available space; the sidewalk, thoroughfares, roofs, cars, parks, beaches, etc., at all hours from early morning until late at night; then ask yourself where are all these tiny ones in the winter time. Are they to be seen on the sidewalks, thoroughfares, beaches, etc.? Oh, no, they are almost like the summer clothes of a tenement dweller stored away in a room for the winer, not to see the outside until the next warm season arrives. This their "wise" mothers do to prevent them from catching cold. Think of a baby put away to pass its days in the warmest part of the house, the kitchen, where there are half a dozen other children playing around and creating lots of dust; where an industrious mother sweeps the room, dusts off the mantel piece, removes the ashes from the stove, builds up a fire and smoke escapes into the room, closes the chimney valve for economy's sake and coal gas accumulates in the room, fries some potatoes, meat, or the milk scorches and fills the room with a choking suffocation, where the husband, boarders or visitors smoke cigarettes or pipe; and its nights in a bedroom having no window at all, or a shaft window which is never opened and even many times pasted around its framework to prevent the least escape of warmth and the ingress of cold air through any possible crevice, etc.

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# Passing of the Profession.

By Alexander Wilder, M. D., Newark, N. J.

THE AUTHOR takes a philosophic view of the situation in medicine as it affects the economic and sociological future of the profession. He recognizes that the profession is in the midst of a crisis from both of these viewpoints, and considers what is likely to be the outcome. He predicts that institutional medicine is destined to lose its control, just as the church has lost ist control in religion, and that individual freedom of thought and action will supersede authority. He thinks that drugless methods of therapy are enjoying a vogue which is altogether too in excess of their real value, and that, while a great deal of their contribution to therapeutics will doubtless be lasting and valuable, the use of drugs will never be discontinued, but, on the contrary, drug therapy will eventually come back again into yet stronger favor.

At the opening of the last winter session of the medical schools connected with the hospitals of London one theme seems to have engrossed their attention. The private practitioner, it was declared, will disappear and be superseded by the Health Officer, whose duty lies in the prevention rather than in the curing of disease. The profession is already in the throes of a double crisis, econchric and professional, one speaker affirmed. The growth of specialism had contracted the field of general practice, and was certain to continue to do so. Epidemic and contagious diseases were becoming less and less prevalent. He regarded it accordingly as inevitable that the medical profession should become more and more the servant of the State, and the office of its members to be the cultivating of health and preventing of disease. Other speakers followed in the same vein, one of them even predicting that the training and service of the medical profession would destroy the very sources by which its members gained their livelihood.

This is an utterance in London speaking for England, and perhaps for those in America, who usually follow where England takes the lead. It may be a forecast of what is to come, but perhaps it is safer to follow the suggestion of Hon. Bigelow, not to prophesy unless you know. There will be "cakes and ale" for a long while to come. It takes a full generation for a new proposition to become incorporated into the convictions of a people. So, for years yet to come, there will be resort to the medical adviser for counsel and the means of healing.

When Emanuel Swedenborg described his view of the final Judgment, he explained that the churches of Christendom would not pass immediately away, but that the individual in a church would enjoy greater freedom because liberty was about to be extended to him. We are now beholding this prediction fulfilled. Something analogous to this is bound to occur in the medical world. As the church has lost control over the freedom of individuals there has been an effort of medical men to grasp it, often irrespective of what is just or even sacred. The present endeavor to chain the sick and dying to the dominion of the physician, is as outrageous as it is a flagrant disregard of what is due to man as man, but it is a sign of declining influence. On the eve of the emancipation of the Israelites from Egyptian thraldom, it is recorded that Pharaoh became more cruel and despotic than ever. It took ten plagues to dislodge him; perhaps there must be something now to

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correspond. Oppression results either in degradation or reaction. Doctorcraft is not venerable, even by its imitation and adoption of the methods of priestcraft.

At the present time, however, the forecast does not appear to be a supplanting by the sanitary officer. Some of us remember that in the Declaration of Independence the King of Great Britain was indicted for the multiplication of useless offices and the appointment of swarms of officers to pray upon the people and devour their substance. There has been a trend in this country in this very direction, till the commonest functions of life are liable to be prescribed by some official persons or regulated by formal license. Not only may such things be done, but overdone. But many are becoming restless, and when unrest becomes general there is likely to ensue a general breakage. In short, the *raison d' etre* will be necessary.

It is significant that when a new thought is astir in the mentral world, a new sect in belief on religious questions that one of the first manifestations is a method of treating the sick. It is a fact to be contemplated; railing is puerile and evidence of weak understanding. The spiritualist movement supplied "healers" and "healing mediums" in large numbers. They enjoyed a success which convinced multitudes. "Suggestion" has its practitioners, and they are not failures by any means. "Metaphysical Medicine" is accepted by men and women of more than common intelligence. And Mrs. Eddy, no matter what we individually think of her, has a following not to be counted and not to be denounced as superstitious or ignorant. The concept of drugless medication is too widely entertained to be easily overturned. The physicians accepting it and those who are in sympathy with it are generally to be found among the superior and more intelligent classes.

All these things indicate a wide dissatisfaction with former procedures, and a growing confidence that there is a more excellent way. This condition of things would not exist if there was such certainty and permanence assured as to warrant dependence upon them. The more arbitrary the measures resorted to against dissidents will operate as persecutions generally do in creating unconquerable disgust and aversion for the persecutors. The Federal Constitution was established by the people of the United States to secure the blessings of liberty to themselves and their posterity, and not to create and perpetuate an oligarchy of privileged individuals to lord it over their fellow citizens.

Nevertheless, while it is wise and just to allow a wide freedom to all endeavors for the bettering of human conditions, especially in the field of the healing art, it cannot be supposed that we are very near such a millennial period as many of these new methods seem to contemplate. We should refrain from persecuting those who are engaged in them, conscious that only that which is really beneficial can long endure. The disappointing of the hope of gain is not sufficient warrant to do otherwise. If there have been, if there shall be, invention or discovery that will enable the mitigating or remedying of human suffering, we want it adopted. We are by no means so learned and skilful that we can afford to dispose with or drive from the field. It is an apostolic maxim, to prove all things, and hold fast that which is good; and that can be done only where there is a liberty. A profession hedged in by penal restrictions can never pass to the height of excellence, but must abide in the dead lead of mediocrity.

It must be acknowledged, however, that despite all that has been or may be attained toward the end of mental healing and drugless medication, there is cer-

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tain to be a great body not accessible to benefits in this way. As we solace our hunger by food and our thirst by drink, so it will be necessary to restore corporal organisms and functions to normal health and activity by such physical measures as we know and can employ. Men to live on angels' food must first become angelic; and we of the common heard must be served for our distempers upon the plane of thought and development where we belong. If we have not the faith which will save us outside of drugs we must resort to the remedies which are likely to meet the purpose. Even the most sanguine reformer or propounder of the new thought will concede so much. Wisdom, he will acknowledge, is for the wise. When we consider the hundreds of millions that constitute the population of the earth and the fact that very few of them relatively have been educated up to these sublime notions, we are forced to the conclusion that the passing of the medical profession is an event still too far off to be reckoned upon. There may be changes of procedure; there have been many such since Hiprocrates, Galen and the later luminaries. But the foundation stands fast. The medical art is still of prime necessity, and not to be outlawed or left in abeyance. The man who treats human maladies will still be a benefactor. He is called out of the ranks as the most humane among them, and that is what the profession truly means. In that view of the matter no priesthood is more sacred, no calling more divine.

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## RECTAL POLYPI IN CHILDREN.

Martin L. Bodkin, in *American Medicine*. states that polypus of the rectum is a most common disease. Bleeding from this source is quite frequent, and when associated with diarrhea is very apt to be overlooked. There is tenesmus produced by the partially protruding polyp. It may be grasped between the sphincters, which forces the escape of blood if eroded. Care should be exercised in all cases of protracted rectal bleeding to examine for either polypi, fissures in ano, hemorrhoids, or ulcers.

Rectal polypi are perunculated rounded tumors varying in size to a hazel nut. These tumors are myxofibromatous or adenomatous in character and sometimes are found in large numbers; usually they are found just inside of the internal sphincter anteriorly, but may be much higher up in the rectum or sigmoid flexure.

SYMPTOMS.—Besides the loss of blood, polypi cause irritation, tenesmus and often a mucous discharge. Prolapse of the rectum often follows the constant effort at expulsion.

Polypi in the rectum are always pedunculated, excepting when very small, and they are easily recognized with the finger.

TREATMENT.—The pedunculated form is best treated by twisting off and cauterizing the base, if done under an anesthetic. Ligation is easier and safer, if the ligature is not too fine and if the tightness is not so great as to cut through the pedicle earlier than a few days. Bleeding from the stump is quite profuse if the ligature slips or cuts through before granulations begin, and a word of warning is here not amiss.

Should the rectum be the seat of a large number of these growths, irrigation with a five or ten per cent. colution of Krameria or witch hazel is more suitable than the above treatment.

The irrigation should be done through one of the double current irrigators made for that purpose and at a temperature of 100 deg. F. A pint or more of the solution may be used at one time, if care is exercised to have the fluid return readily. After a few weeks there is generally a marked improvement, and as the associated inflammation subsides, the irrigation may be lessened to three times a week.

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# Temperaments: Is There a Neurotic One?*

By Robert Jones, M.D. Lond., F.R.C.P. Lond., F.R.C.S. Eng.,

Lecturer on Mental Diseases, St. Bartholomew's Hospital Medical School; Resident Physician and Superintendent, London County Asylum, Claybury.

(From *The Lancet.*)

THIS is an age which concerns itself about "equality of opportunity" if not "equality" in many other directions. Democracy, represented by the State, insists that there should be no privileged class, that every person his a right to decent education, housing and food, and that the net for preferment, promotion, and office should be cast widely; but there are drawbacks to this Utopian scheme. We are not all constituted alike, and to avoid waste of energy on the part of the State to bring about equality, as well as on the part of the individual to be equalized, it is well we should know the "square pegs," "misfits," and even "impossibles"! We know people as tall or short, fair or dark, square or slim, and we know by experience that "one man's meat is another s poison," and if we can discover by some special means of observation the distribution of endowment, the capacity for education, the suitability for occupation, the fitness for after life, the taste, the disposition or tendency to act, or even the susceptibility to disease, in other words, if we can ascertain the "temperament" of the individual, we and he, or she, may be saved much disappointment and sorrow, possibly also of misery and shame.

In medicine we know that drugs act differently on different persons, and sometimes the normal effect fails to appear unless the dose is varied. Some cannot take quinine, others are affected unphysiologically by opium. One person becomes insufferably ill from the presence of a cat in the room, another at the odor of lilies. One suffers emotional disturbances at the creaking of new boots, another when a pencil writes on a slate, a third at the creasing of paper or the scraping of finger-nails, and similar personal idiosyncrasies have disturbed men of great mental power and ability. Schiller required the odor of decaying apples to stimulate him in composition, and Kant the sight of a button in a student's coat to help him to lecture, and I have known promising adulescents in my own profession who could work better when a photograph of their admired one was on their study table! We know the course of disease in different persons necessitates different treatment, we have learned that different climates have to be avoided by different people—one cannot live at Ramsgate, for instance, and the other languishes at Ventnor, and *vice versa;* and in treating diseases we have to remember that we treat the individual and not the disease; in other words, the treatment required must depend upon the "temperament," a knowledge of which may enable us to guard against diseases to which we may be particularly liable.

### Origin and Signification of "Temperament."

Temperament is a very old word. It was in use over 2000 years ago and is said to have been originated by Hippocrates 400 B. C. The ancients had no stathoscopes, thermometers, watches, nor instruments for measuring arterial pressure other than the end of the fingers. Moreover, they had no physiological and but little anatomical knowledge of the internal organs, which they could

*The Mid-sessional Address delivered before the Abernethian Society of St. Bartholomew's Hospital on June 8th, 1911.

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neither view as we do nor bring them into recognition outwardly. In consequence they eagerly cultivated a knowledge of external signs, and finding that people differed, often remarkably, in external conformation as well as in mental and moral character, they attributed those differences to the excess of one or other of the humors of the body—e. g., the blood, bile, lymph, or phlegm, and according to the mixing of these fluids there resulted an excess or deficiency in their constitutions, and so persons were described as of a sanguine, bilious, or melancholy and phlegmatic temperament. Even in the remote past, dark or fair persons were known to be predisposed to diseases of different types or classes, and the same diseases were known to affect them differently and needed different treatment for their relief. Experienced physicians and surgeons in more modern times, relying on the maxim that we are often better known by our looks than our words, have followed most keenly the study of resemblances and differences in their patients—certainly keenly in this hospital in the time of Dr. Patrick Blank, who, without examining them, arranged his out-patients on seats according to the "physiognomy" of their disease. By this experience many of them arrived at a sort of instinct or divination by which the true character and the history of their individual patients could be read in the external features and physical conformation. They were enabled to discover the presence of, and, it is stated, the predisposition to, disease in their patients, to fortell the nature of their illness as well as its probable termination, thus laying the foundation of prognosis, and, as is further added, to proclaim the nature of the moral affections.

The word "temperament"—from *temporare,* to moderate, derived from *tempus,* time, the great temperer—is the most popular and least exact of all the terms used in describing differences of organization. One writer states that all creeds and opinions are matters of chance and temperament, giving it the widest range and the most varied possible use, but implying that, given a certain personality or certain physical characters, the corresponding mental as well as moral traits may also be predicted. The words *temperamentum, temperatura, temperatio* have also been used in the same sense, and so have *complexio,* crasis (———); eucrasia, a good temperament; eu-exia (——), a good constitution; euchymia (——, juice), a good state of the humors. The different mixing or tempering of the constituent parts of the body was assumed to cause the difference between individuals, this difference of organization being due to a difference in the function or activity of the organs concerned.

To define the word temperament is not an easy task. By some it has been applied to indicate the relation between certain physical states (such as the size and form of the body, the size and shape of the head and face, the color of the hair, eyes, and complexion) and mental states. Others regard it as the actual combination of certain physical with certain mental characters. There is a danger, however, in reading too much from physical characters to mental traits, and there is no doubt that this has been overdone. Minute details and deductions having been inferred which experience would neither warrant nor justify. We ourselves know the impulsiveness, the love of change, and the unwarranted hope of blue-eyed, red-haired people (the sanguine temperament) as contrasted with the caution, persistence, and ambition of the dark-eyed and black-haired (the so-called bilious temperament). Yet surrounding circumstances might so modify natural impulses and tendencies that a carroty-haired girl—a *femme blonde*—might be transformed into the unemotional and simple nature of her black-haired sister,

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the *femme brune*. John Stuart Mill clearly recognized that differences of bodily structure were correlated with different mental states, and George Eliot went further and declared she never knew brains and red hair associated.

Mainly, however, the term "temperament" came to mean certain physical conditions, and Galen, in a Latin treatise translated by Linacre, suggested nine kinds of temperaments, based upon four simple physical states, which he described as moist, dry, hot, and cold. Four others were obtained by mixing these—viz., hot and moist, hot and dry, cold and moist, cold and dry—the ninth, which he called the balanced temperament, being made up "through the proper mixture" of all the others. According to their preponderating activity and in accordance with the system of humoral pathology the function of the four chief organs in the body gave their names to corresponding temperaments—viz., (1) the heart and blood; (2) the liver and bile; (3) the spleen, which was surmised to secrete black bile; and (4) the brain, with the pituitary body, which secreted phlegm, and thus the varieties described by Galen were reduced to four. In order fancifully to delineate the four temperaments they have been considered analogous to the ages of man and to the seasons of the year—the sanguine corresponded to childhood and spring, the bilious to youth and summer, the melancholy to middle age and autumn, and the phlegmatic to old age and winter. With the progress of experimental physiology the spleen was discovered not to secrete black bile, and on anatomical grounds the atrabilious or melancholy temperament was discarded, and in its place was suggested a nervous one, and we desire to know if such exists?

**Temperament a Tendency to React to Stimuli.**

As to whether temperament is physical or mental, or neither, probably no two authorities are fully agreed, but in our view it is neither a *combination* of states nor their *relation;* neither is it a physical condition, but a *mental* "tendency." It will be taken throughout this paper in a phychological sense and as indicating certain reactions or tendencies on the part of the organism, in the first place towards its environment, or in other words, the tendency to certain kinds of conduct, based on the correlation of physical with mental states, and secondly, the reaction of the organism to disease. We cannot fail to recognize that there is a correlation between certain bodily states and certain mental states shown by the appearance of the brain in certain forms of insanity, and there is also a correlation between certain bodily states and certain morbid conditions described as scrofulous, gouty, cancerous, hæmorrhagic, rheumatic, sthenic, and dartrous tendencies; but empirical generalizations such as these must be further investigated before progress can be made in definite and actual correlation. Whilst therefore appreciating the reality of such a thing as "temperament," and whilst accepting it as a phychological tendency, A. Stewart and others who have written on the subject consider the correlations of the four chief types of temperament to be: (1) for the sanguine type, persons who are short and often stout in later life, who have fair complexions, blue eyes, and red hair; mentally active, emotional, and excitable, but lacking in persistence and steadiness and showing a tendency to acute illnesses; (2) for the bilious or choleric, those who are thick set, rather clumsy folk, with dark eyes, hair, and complexions, people who are often gouty or rheumatic, and who are mentally unemotional, deliberate, and jealous; (3) for the phlegmatic or lymphatic, people with bulky forms, light hair, pasty complexions, slow movements, mentally "heavy on hand," slow, and plodding, a type which tends to dementia and diseases of a slow course; and (4) the

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nervous, with slight, slim, tall figures, large foreheads and pointed chins, dark eyes and sallow skin, those who think quickly, react rapidly, are susceptible, but easily get over their emotions. These tend to suffer from nerve storms, not infrequently ending in insanity. Probably no person has only one or other of these four recognized types, the chief characteristics in any one person partaking of the compounding of all the varieties, hence the necessity for some other more definite classification. Even in twins, whom we should expect to be most alike, there is often a greater divergence than there was between Esau and Jacob.

**The Body Only the Agent of Mental Expression.**

If we take the body to be the organ of the mind's expression, and the body must be considered biologically as an aggregate unit characters each of which has independence of a kind; we shall find that temperament, in the sense of being the aggregate of a man's physical personality, is an untenable theory, and the term has ceased to have any definite anatomical meaning. The human organism, like any other, reacts to its environment, and it is this tendency to react which I shall describe as "temperament.' Any stimulus, external or internal, impinging upon any sensory areas of the body tends to come out as movement, and it is this reaction to outward or inward excitement which is the basis of human activity. Precisely as the amœba is seen to contract from the excitement of contiguous particles which act as stimuli to it, so exactly does the human body react to its stimuli. It is this reaction, in my opinion, which is the fundamental quality of temperament, and we know how infinitely varied is this reaction in different individuals. A race or a nation is composed of many individuals, as the individual is composed of many cells, and the national or racial temperament is the tendency it has to react to stimuli from within or from without.

**Influence of Environment.**

The physical organism, as we all know, is the resultant, so to speak, of developmental forces—i. e., it is the result of inheritance. The original gametes—the male and female cell with their chromosomes—united and become the zygote out of which the individual arises and grows, by the power of certain chemical combinations, through certain states based upon laws, which, although we know little of them, we describe as the laws of inheritance. In the study of heredity we find certain characteristics dominant in the parents repeating themselves in the offspring, which is a blend of all its ancestors, but the influence of the environment must not be overlooked as a controlling power, for "nature" and "nurture" both count. In the course of long ages the surroundings are undoubtedly a great modifying factor upon growth and development, carrying with them also a certain method of reaction which I call a "temperament." The nature of man is "like the dyer's hand, subdued to what it works in." The capability for adaptation and improvement which the history of man records shows so many changes that it would be impossible correctly to infer definite mental qualities from outward appearances. Food, climate, occupation, soil, and the general aspects of Nature all exercise a modifying influence on man's development.

We can tell the agriculturist, the manufacturer, and the miner from their occupations, food, soil, etc. We can also tell the doctor, lawyer, solicitor, and sailor by the influence of their environment. In the vegetable kingdom we see in plants that the environment counts much as a controlling power. Alpine plants when brought down to the plains assume plain characters, and those characters created by environment become fixed, for the plants come true to the seed, reappearing with their acquired

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characters when the seed is sown. The same with water plants which as a rule have deeply dissected leaves when growing in water. Land plants thus grown tend to take up the water characters, and these characters reappear again when the seeds of the new plant are sown. The same influence of the environment occurs with plants of the dry desert or with those of moist Equatorial continents. As in plants, so in animals and man. The environment is able to modify appearance, stature, language, customs, and conduct, and, owing to environmental differences, the geographical limitation of man is rarely an ethnographical one, as we know in regard to our own country.

**Relations of Uniformity of Structure and Qualities of Mind.**

Although the Englishman is made up of grafts from every race of the Aryan stock, yet abroad he is always "spotted"; at any rate, the hotel keepers seem to find it out! Is the American, the Frenchman, or the German identified by some peculiarity of configuration which is also always associated with certain mental qualities or by certain tendencies in conduct? I venture to deny any such constant association. Uniformity of structure in people is one thing, but the uniform association of structural qualities with qualities of mind or conduct in them is quite another. There is no more reason for considering that certain uniformities of structure (which enable us, for instance, to identify a Jew, a Frenchman, a German, or any other nationality) should imply similar temperaments than there is to suppose that such uniformities of structure or similarity of configuration as enable us to identify members of the same family should imply for each of its members the same temperament or the same mental reaction, a condition we know not to exist. It must not be assumed from racial likeness that structural similarity implies the same invariable association of mental qualities. For this reason we protest against the *physical* explanation of "temperament." The same excitation of the cortical cells in one person, even of the same family and descended from the same ancestors, gives rise to different effects when applied to another member of the family, and it is erroneous to associate physical similarity with uniform mental qualities.

**Constancy of Some Family Peculiarities.**

It is true that there are family peculiarities which are very constant — such, for example, is the nose of the Bourbon Royal houses of France, Spain, and Naples, or the Hapsburg lip—yet these outward marks imply no uniform mental correlation. Analogous peculiarities may characterize races, yet they may not imply similar mental tendencies or temperaments in these races. Some of these family peculiarities are often in the nature of degenerate stigmata. The Hapsburg lip is not inherited by the females, yet it is transmitted by them. Napoleon I. married an Archduchess of Austria, and her son, the King of Rome, inherited the Hapsburg characters. Charles V., the greatest European potentate of the sixteenth century, had such a well-marked lower lip that each time he ate, it is said to have touched his nose. Philip II., son of Charles V., possessed this prognathous skull and lip of the Hapsburgs, and he was an unmistakable descendant; but Don John of Austria, although acknowledged to be another son, had none of these characters, and history has since rejected this filiation and has relegated his ancestry to the German servant, Barbe Blomberg, and her vulgar paramour. Some doubt has existed as to the legitimate claims of Louis XVII., as he inherited none of the prognathism of Louis XVI. and Marie Antoinette, who were both Hapsburgs.

**The Face as an Index to Character.**

I do not say that much information as to mental character is not to be obtained

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from the face. The whole trend of experience is the other way; all I say is that too much trust must not be laid upon the face, for we are apt to deceive ourselves and be deceived by excessive reliance upon the physiognomy. Many attempts have been made to read temperamental traits from the face, and faces have been divided into the square for the bilious and lymphatic, tapering for the sanguine, and for the reflective and introspective the so-called melancholy face; but it hardly need be said this question of expression implies a much more complicated inference than seems to us on the surface, for we have the square-jawed midnight marauder — the typical "Bill Sykes," and we have the tapering face of this man's tool—viz., the sneak-thief, who is content with minor achievements, such as stealing purses and picking ladies' pockets in the intervals of loafing. There is no doubt the physiognomy has been greatly exploited as a field for information in regard to character. As an expression of the emotions it is certainly of value, particularly of those fundamental emotions relating to pleasure and pain, for the face, like the barometer, is a good indicator of *existing* emotional weather, but too much confidence must not be placed in the face as the chief interpretative medium of character. In regard to the elements of the physiognomy, the eyes are looked upon as the "pole-star" for those who seek guidance as to the emotions; the eyes of Chatterton had "fire rolling at the bottom of them," and those of Burns were "like coals of living fire," and Sir Walter Scott's "literally glowed"; but the hand is also a valuable guide. Nevertheless, I am inclined to think that the most reliable element in the face is the mouth. Possibly the more fleeting and transient feelings of the moment are better reflected in the eye; whereas the fixed, firm, decisive, and permanent constituents of character are in the mouth. We all know the roving eye which looks upon everything and sees nothing, and we recognize the inconstancy conveyed by the shifting eye.

As to the general mental disposition, we rightly associate the different emotions—e. g., joy, caprice, anger, fear, and ambition—not with the bony framework of the face, but with the more mobile features controlled by the muscles and nerves of the face. It is the *tout ensemble,* the whole assemblage of the visage in which we see emotion and which rightly show character. For instance, we know one person to be suffering from melancholia, another from mania, a third from dementia, a fourth from confirmed epilepsy, and a fifth from general paralysis by outward facial characteristics. A sixth, perhaps a summary of all the others, which forms the basis of the insane temperament, gives, on the other hand, no indication by physical signs—i. e., one needs to find out the mental reaction to ascertain the temperament. Neither the highest powers of the microscope nor the most skilled chemist would be able to say that a person possessed the temperament of the paranoiac, who is the most dangerous as well as the most chronic of all the varieties of insanity. For this it is necessary to ascertain the mental reaction.

### Classification Based on the Mental Reaction.

The mental reaction or tendency to act must be taken as the only guide to the temperament or the personality, and mental reaction originates primarily out of the master structure—viz., the brain, which gives to the individual the form of character or the conduct he tends to. The brain of man differs from that of the lower animals, and there is also a racial difference, for the brain of an Englishman differs from that of a Chinaman. There is a diversity in shape, weight, size, quality, and convolutional pattern, and a corresponding diversity is seen in their mental reaction.

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# CURRENT MEDICAL LITERATURE.

## APPENDICITIS AND LIFE INSURANCE.

FAWCETT does not altogether agree with the condition laid down by an American office that an applicant must have been free from an attack of appendicitis for a period of two years ere his application would be considered. Several medical authorities take a similar view. The author makes the following points: (1) The risk of a second attack of appendicitis occurring is a diminishing one. (2) For practical purposes some limit of time must be fixed at which the risk reaches zero, and for that purpose a period of five years is suggested from the termination of the first attack. (3) Some additional rate must be fixed to the premium to cover the risk for these five years. (4) Whatever the rate fixed may be, in the case of an applicant who is going abroad or who will be out of the reach of skilled assistance at least double the fixed rate should be charged. Fawcett proposes to tax those cases in which appendicitis has occurred by an addition to the premium for a period of five years of 1 per cent. on the sum assured. This is thought to be a better plan than to create a debt on the policy; first, the insurer gains thereby the full value of his policy for a comparatively small extra cost considering the risk the company is taking; secondly, there is no dissatisfaction on the part of the beneficiaries, as there would be if after the death of the insured in the first year or two they found they were entitled to only half or three-fourths of the sum for which the deceased was insured on account of the debt on the policy.

In the case of relapsing appendicitis the author suggests postponing the application until after the vermiform appendix has been removed, or else the determination of a rate to cover the risk of operation. Fawcett thinks such a rate might be recommended as would cover a possible claim of 2 per cent. of all cases in which the vermiform appendix is removed during the quiescent period, and this would be met by a single addition of 2 per cent. on the sum assured.

In the case of an applicant accepting the terms but not undergoing an operation and dying from appendicitis within twelve months Fawcett is of the opinion that the risk of such an attack is so exceedingly small that the company might accept it. In the case of a proposer who at the end of a year, when about to pay his second premium, was found not to have submitted to operation, it is suggested that 2 per cent. be added each year to the premium for the first five years and 1 per cent. for the next five years, unless, in the meantime, a certificate shall have been received that the vermiform appendix had been successfully and completely removed, when no further extra premium would be required.

In the case in which an abscess has been opened and the appendix not removed, if the operation wound has healed and the applicant appears in all ways sound, acceptance might be reasonably granted three months after operation with an addition of 1 per cent. on the sum assured for two years. Twelve months after the operation risks might be taken with 1 per cent. on the sum assured for one year. After eighteen months to two years from the time of complete recovery from the operation ordinary rates may be charged. In case of appendicular abscess in which the appendix was removed at the time of the operation, if all is satisfactory at the end of three months, the applicant might be accepted with an extra 1 per cent. on

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the sum assured for one year, and after a year has passed at ordinary rates. In a case of appendicular abscess ruptured spontaneously and not operated upon, no applicant, even in the simplest case, should be accepted until at least six months after complete disappearance of all signs and symptoms of appendicitis or its results. After that an addition of 1½ per cent. on the sum assured for the next two years would be a reasonable one to make to cover the risk involved.

Cases of general peritonitis (*a*) with or (*b*) without a localized abscess and removal of the appendix: (*a*) No cases should be accepted at an earlier period than twelve months after the operation wound has soundly healed. If the case is one in which simple drainage has been carried out and the appendix has not been removed, then some such addition as 1½ per cent. might be charged for two years and no case accepted earlier than twelve months from date of operation. (*b*) In severe cases at least two to three years' immunity from symptoms should be required before acceptance is considered, and for the next two or three years, at any rate, some addition would be necessary to cover the risk—possibly 1 per cent. on the sum assured for the period mentioned might suffice.

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## TREATMENT OF TUBERCULOUS GLANDS.

Bennett, in the Practitioner, holds that the treatment of the primary adenitis in the case of tuberculous glands is the healing of the focus from which the infection is drawn. Assuming that no focus of infection can be found, and the gland principally involved persists in the rising and falling habit, or continues to increase, and indeed if it does not diminish, its removal is strongly indicated, not only on its own account, but with a view to the prevention of further infection of neighboring glands. Should other glands have already become involved, they should certainly, when the main gland contains, as it often does, a small abscess, be also removed, as they will frequently be found to contain a suppurating cavity, although they may be insignificant in size.

The primary source of infection having been cured or become non-existent, if an affected gland does not diminish, although it may not for a long time increase, it is very suggestive of invasion by tubercle; this suspicion may or may not be confirmed by the opsonic index or other tests. Assuming for the moment that evidence is forthcoming which would justify a diagnosis of tubercle, the methods available for treatment are for practical purposes the tuberculin method, the open-air and climatic method, and the traditional treatment by drugs and specialized nutriment. For working purposes these are in some degree generally combined, but for purposes of discussion it is convenient to consider them separately.

Tuberculin in the author's experience is of little service except in the very early stages of bacillary invasion.

As to the open-air and climatic method of treatment, the author considers continued residence at the seaside, or preferably on board ship, infinitely more beneficial than treatment at high altitudes. It should be noted, however, that children born and living at the seaside developing tuberculosis there benefit vastly by change inland, and in the same way that those who develop tuberculosis inland derive benefit from a change to the seaside or shipboard. It is also true that a child having left its place of birth to reside elsewhere will, if it develops tubercle, derive more benefit by a return to the place of its nativity than any other place, provided of course that its birthplace was not a crowded town or an obviously insanitary locality.

As to local treatment, the less a tuberculous gland is worried by local applications, the better. Painting by iodine is

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as useless as unscientific. The production of hyperemia is sometimes beneficial. Arsenic and iron are the drugs of main service given internally. During the stage of softening and suppuration in all cases in which the capsule is intact, the gland should be removed completely by dissection, and when possible whole. When the broken-down contents have perforated the capsule and invade the surrounding parts the matter is different, as in many cases anything like a formal removal by dissection is not feasible, and is generally unnecessary, since a complete cleaning out may be accomplished by the curette. Thereafter a small drainage tube is desirable for twenty-four to forty-eight hours.

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### CHRONIC GONORRHEA IN WOMEN.

Norman P. Geis, writing in the *International Journal of Surgery*, considers a gonorrhea chronic when in mild cases it lasts beyond four weeks and in severe beyond six weeks, and then always owing to complications. An untreated case is always chronic, for the longer patients go on without treatment the deeper the germs penetrate. Gonorrhea is never chronic from the beginning. The infection at times is very mild, and the woman's attention is not directed to her genitals because the irritation is slight. Mild gonorrhea may be taken for a leucorrhea only, as the latter is common in all women. The gonococci may appear to be absent for a time from a chronic case only to reappear, and this may continue for years. They, in fact, do not disappear, but are few in number and located in the glands of Skene and Bartholin or in the cervix. Irritations of various kinds stir them to activity again. Childbirth is a frequent cause. A lowered resistance of the body in general will also start them into reinfection.

In treating a chronic gonorrhea or a reinfection from an apparently cured chronic case, build up your patient. Often the failure to cure these chronic cases is due to overlooking the fact that the gonococci have lowered the resistance powers to a marked degree. Look beyond the local condition; remember that an anemic genital canal cannot resist infection and the deep penetration of the cocci. In several cases, because of lack of proper nutrition, the author was not able to effect a cure in seven to nine months. These women finally, after receiving proper nourishment and with the help of large doses or iron, improved in their resistance power. Two months after the anemia was gone all were cured.

The local treatment is directed to the parts that remain infected. These will be discussed under their respective headings.

Urethral gonorrhea. When chronic, this condition is always due to infection of Skene's glands. The expression of a drop of pus from the gland or of even a watery fluid indicates the source of infection.

Irrigation of the duct with picric solution with a hypodermic syringe and needle with a blunt point will clear most cases. It is at times necessary to lay open the whole duct with the knife. Paint the opened duct with 95 per cent. carbolic acid followed sixty or ninety seconds later by alcohol. Apply a dressing wet with the picric acid solution, and continue its use till healing takes places. If an abscess forms in the duct, open and treat it as above.

Bartholin's glands are a very frequent source of the chronic condition. The glands themselves are rarely involved, the ducts being the part infected; they harbor the cocci and from time to time discharge them into the vagina. This keeps up a chronic low grade infection. The external opening will always be purplish red if the duct is infected. The color contrast is well marked. The contents of the duct are easily expressed by pressure. After this has been done, syringe with the picric acid solution, leaving some within the duct. The contents ex-

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pressed at the next treatment will be found stained yellow by the acid. Dilatation of the duct is at times advisable. The author has not found it necessary to excise these glands for this condition. When an abscess forms lay it open to its full extent by a crucial excision, clean it out and paint it with 95 per cent. carbolic acid. Pack the cavity with gauze saturated in the picric acid solution. Change the dressing every second to fourth day.

*Cervical Gonorrhea.*—The cervix is always infected in untreated cases. The discharge from it is tenacious and scanty. The most successful way to remove this discharge is with the curette. The author uses a special sharp cervical curette for this purpose. This causes some bleeding. Do not force the curette beyond the internal os. Now paint the canal with 50 per cent. silver vitellin and insert tampons wet with picric acid solution. One can always obtain the picric acid stain from the cervix at the next treatment, and this proves that it enters the canal from the tampon.

A chronic gonorrhea will take from eight to twelve weeks to get well. Geis does not consider a case cured until all discharge has ceased and the following tests made with negative results:

1. Microscopical test of the expressed Skene's glands, three or four smears.
2. Same tests from Bartholin's glands.
3. Micriscopical test from a tampon placed against the cervix and left in place forty-eight hours. This is to be removed only by the physician and two slides smeared for examination.

These tests are made two days apart. It, therefore, takes about ten days to complete them. Only then can a cure be claimed.

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## GYNECOLOGICAL HINTS.

Ralph Waldo, in the *International Journal of Surgery,* gives the following advice:

A woman should not be allowed to take too active exertion soon after delivery. The old adage, "two weeks in the bed and two weeks on the bed," is a good one. In the human race gravity has a tendency to drag the uterus out of the body. The organ and its ligaments have been nine months in developing and complete involution does not take place in nine days. There is more or less vaginal discharge for about two months. It has been said that the peasants of Europe get up the day of delivery, or, at best, remain in bed a very short time. Look at them. Before childbirth you will find them strong and well developed; after giving birth to two or three children they look old and haggard. At one time I treated a large number of women who had been a very short time in our country, and in no other class have I ever seen so general and extensive uterine disease as the result of partuition.

Don't use vaginal douches after labor unless there is a special indication for them. If you do, the process of repair that is taking place in small abrasions in the irepneum, vagina and cervix will be materially interfered with.

When indicated, a dull curette as large as can be easily passed through the cervical canal of a puerperal uterus can be safely used, and will accomplish all that is necessary.

The puerperal uterus has been many times severely injured with the sharp curette. There are many instances where a curette has been pushed through a soft uterus; it is impossible to pull one through. Therefore, great care should be used in introducing the instrument into the uterine cavity and all force should be avoided in pulling it out. This little precaution will prevent many a perforation of the uterus.

A large percentage of puerperal infections start as wound infections, and usually originate not far from the vaginal outlet.

Strictest antiseptic precautions at the

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time of delivery, and moistening the pad that comes in contact with the vulva with a solution of bichloride of mercury (1-5,000) for the first five days after delivery, will prevent sepsis. I always wear rubber gloves during delivery.

There is a stage in the development of every uterus when anteflexion is normal. If for any reason it is arrested or retarded at this stage, the anteflexion remains and becomes a pathological condition. Malnutrition, excessive mental activity or any infectious disease, shortly before or at puberty, frequently results in this arrested development.

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### NERVE SURGERY IN DYSMENORRHEA.

M. L. Harris, in the *Journal A. M. A.*, divides dysmenorrheas into three groups: (a) those due to deranged general states; (b) those due to abnormal conditions of the uterus; (c) those due to abnormal conditions of the ovaries and tubes. It is these last which he especially considers, and especially those that are not accounted for by any general state or disease of the uterus, the so-called ovarian dysmenorrhea, which he is convinced exists. The pain is mostly premenstural, usually bilateral, and the ovarian regions are very sensitive to pressure. The patients are frequently neurotics, or have become such. He conceived the idea of relieving these patients by resection of the nerves supplying the ovaries and the internal three-quarters of the tube, especially those of the plexus aorticus abdominalis, or, as Frankenhauser calls it, the plexus spermaticus, which are purely sympathetic in their nature. He describes the anatomy of this plexus and says the resection of the nerves is a simple matter if carried out as follows: "The abdomen is opened in the usual manner. The infundibulopelvic ligament picked up with a forceps and made taut. An incision 3 or 4 cm. in length is then made through the peritineum along the free border of the ligament beginning well up toward its proximal end. With the handle of scalpel or blunt dissector the two layers of peritoneum are freed from all the other tissues forming the ligament; a catgut ligature is passed around the proximal end of this mass and tied; a similar ligature is passed around the distal end and the intervening portion, usually from 2 to 3 cm. in length, is resected. The incision along the free border of the ligament is then closed with catgut and the operation is completed. It will be readily understood that in the small mass of tissues removed are included all the nerves passing to the ovary, as well as the ovarian vessels from which it is impossible to separate them. As the ureter enters the pelvis through the base of the proximal portion of this ligament, great care must be exercised not to include it in the ligature. Of course, the resection is made bilaterally if the trouble is bilateral.'" The effect of the resection is to cause anesthesia of the ovaries and inner portion of the tube. Of course, this operation does not relieve other forms of dysmenorrhea than those attributable to these nerves.

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### X-RAYS FOR RINGWORM.

D. W. Montgomery, in the *Journal A. M. A.*, refers to the clinic of Sabouraud and his treatment of ringworm by the X-ray. The methods are described in detail and some of the prescriptions employed are given, with full directions for their use. The X-ray treatment has some disadvantages. The difficulty of treating ringworm of the scalp with the ordinary methods lies in the thick coating of stout hair in which the fungus lodges, but with the affected area completely denuded of hair by the X-ray the disease becomes as easy to treat as if on the free surface of the skin. A rather heavy dose is required, however, usually for about fourteen minutes at 20 cm. The risk of causing an X-ray burn is therefore imminent. In Sabouraud's clinic it is said that they never have any unfortunate results, but

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other operators are not always so successful. The pastilles of Sabouraud which are used as control tests, as made in Germany, England and France, are not always of uniform composition and their change of color when interposed in the X-ray may not always be a reliable guide. When an ordinary pyogenic infection of the scalp is associated with ringworm Alibour's lotion is an excellent remedy. It is composed of sulphate of copper 2 gm., sulphate of zinc 7 gm., camphorated alcohol 20 gm., water from 1,000 to 2,0000 gm. It is an excellent antiscreptococcic as well as antistaphylococcic lotion, and can therefore be used in erysipelas, etc., with advantage. In conclusion, Montgomery speaks of the immense skin disease material passing through the hospital which is an embarrassment of riches, as inducing imperfect diagnoses.

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## REMOVE THE ADENOIDS.

The treatment of adenoids, says R. E. Holmes, in the *Eclectic Medical Journal*, can be stated in three words: *"Remove them completely."* There are parents and physicians who are saying, the child is too young, or the child is too delicate, or the weather is too cold, wait till he's older, or wait till spring, or wait till he's stronger. Let me say emphatically that no child, except the unborn, is too young to have removed from him the adenoids that endanger him in a thousand ways that I have had time to but hint at. Delicate? How could be he anything else while deprived of air properly warmed, moistened and filtered by the nasal chambers as the Creator intended it should be before entering the lungs. He will never be anything else but delicate, deformed, asthmatic, deaf, idiotic, if he is allowed to use his mouth for a nose.

Again, there are some physicians who are opposed to the removal of adenoids as well as diseased tonsils for the reason that "the child will grow out of them." Whilst it must be admitted that these hypertrophies gradually become reduced in the adult, remember that the victim has "grown into his symptoms," and with all the reduction of the growth which was the originator of all the trouble, there will be no reduction of his deafness, St. Vitas' dance, stammering, uncontrollable fits of temper, recurring phlyctenular keratitis and conjunctivitis and other eye troubles, deformity of face and chest. There will be no reduction of his enormous mental and physical handicap placed upon him by his ignorant or pig-headed parents.

The eye, ear, nose and throat specialist comes in contact every day with patients in middle life, who are the victims of adenoids unrecognized in childhood, who are now suffering hopeless and incurable deafness and other sequelæ of adenoids, all of which might have been avoided or cured had knowledge of these things been vouchsafed the physicians and parents when the now hopeless victims were children. And the general practitioner sees many cases of complicated chronic disorders which are the bane of his life and ruffle his otherwise placid nature, and perhaps cause him to speak harshly to his good wife after a day of torment by these cases in his office.

If you could have before you the detailed physiological and pathological history of the infancy and childhood of all these cases I believe that you would find adenoids largely written on that history.

I intimated a moment ago that the physicians and parents of forty years ago had the excuse of imperfect knowledge of these things, but what excuse can we, with these facts before us, have offered in our defense by the physicians of forty years hence when they see the patients then in middle life (now our two to fifteen-year-old patients) hopelessly defective as the result of our neglect to preach and act upon our knowledge of to-day?

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# THE DOCTOR HIMSELF.

## SHOULD A PHYSICIAN HAVE A LIBERAL EDUCATION?

ANDREW J. HOWE, in the *Eclectic Medical Journal* of 1888.

"A LIBERAL education" has not as yet been cleverly defined, but is presumably at variance with a stinted or cramped education. A "liberal education" once embraced the classics and higher mathematics, but at present the former may be omitted, and *physics* substituted. A London University matriculant must have something more than a smattering of "Mechanics and Experimental Science," the latter embracing kinematics, dynamics, and statics—all preparatory studies essential to matriculation. Now, to acquire what might pass as a "smattering" of knowledge in the various branches of the science named, how could the learner get along without some classical training? In fact, definitions can not be mastered without a familiarity with Latin and Greek. It will be seen then that what passes as a *liberal education* logically presupposes a knowledge of the classics. And here I should not be understood as demanding that a medical student must have an acquaintance with Latin and Greek before he enters the medical college—I simply mean that the *more* liberal his education the *easier* it will be for him to go to the front.

In a criticism I expressed on the topic—not on the essay—at Detroit, I made the humiliating confession that I knew nothing of "the classics" when I entered a medical college; but finding myself at once in a quagmire of technicals, I resolved to take the shortest way out of the jungle—I bought a "First Lessons" in Latin and Greek Grammar; and when I found I needed a teacher to give me an understanding of these I dropped medicine for six years that I might "fit for college" and take a regular four years' course at Harvard. A less expensive career might have been adopted—a private tutor might have answered quite well. But there is no such leveling course as that to be encountered in a popular university, where individual conceits are knocked higher than a kite—where lofty notions of one's qualities are ruthlessly trampled in the dust—where combatants in physical and mental arenas learn to give and take, and not whimper when beaten.

Yet, when the University *curriculum* is over, the Bachelor of Arts is not able to earn a living—he is not wanted in the scientific laboratory—he is not fitted to conduct a piece of engineering—he can not determine how many solid and square feet or yards there may be in a piece of architecture—he can not preach in the pulpit nor practice at the bar—and he is totally unfit to set up as a doctor. What, then, is he? Simply *prepared* to study in a course which leads to the higher walks of a learned vocation.

The man who passes as possessing a liberal education—whether a farmer, mechanic, a chemist, a preacher, or a doctor, is a "hard student—he studies every day, and never goes to bed till he has learned something he did not know before. If he be a successful practitioner of medicine—have all the patronage he can care for, and more too—he reads understandingly, or inquiringly, some new book or periodical before the day ends. The doctor who has not read *Watson's Practice* can not appreciate *style* in the literature of medicine; and the surgeon who has not the *Operative Surgery of Velpeau* can poorly appreciate what constitutes surgical scholarship.

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How often the ingenious writer complains that he can not find some rare case described in "the books"—and he flatters himself, perhaps, that he has discovered something! What books has he consulted? Why, the text-books he carried home from college! How many of them? Possibly ten or twelve—and he is content with the consultation of these? Is he out of patience with the authors or compilers of these "text-books" because everything in the literature of medicine was not embraced in the moderate sized volumes? He is, for it costs money to buy a library, and time to read what may be in the books—to glean a little of value here and there, and to be forced to cast aside stacks of chaff! And the good is to be marked or indexed, that it may be available when needed, though years have escaped since the annotation.

Is the literary road hard to travel? Is it beset with flinty shards and jagging thorns? Is it uninviting in length and weariness? Is it profitless and unsatisfactory? Only those who enter upon its ways appreciate the charms of the journey—at every turn in the road there is a captivating surprise—an allurement to go on and on, till the idea of stopping would be entertained with distress. The acquisition of knowledge is attended with more pleasure than the accumulation of wealth. Besides, scholarly attainments rank higher than riches in the social scale.

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## THE DOCTOR AND THE PATIENT'S FRIENDS.

It is not only for the sick man, it is for the sick man's friends, that the doctor comes, says Thackeray in Pendennis. His presence is often as good for them as for the patient, and they long for him even more eagerly. How we have all watched for him! What an emotion the thrill of his carriage wheels in the street, and at length at the door, has made us feel! How we hang upon his words, and what comfort we get from a smile or two, if he can vouchsafe that sunlight to lighten our darkness! Who hasn't seen the mother prying into his face, to know if there is yet hope for the sick infant that cannot speak and that lies yonder, its little frame battling with fever? Ah, how she looks into his eyes! What thanks if light is there, what grief and pain if he casts them down and dares not say "hope"!

Or if it is the house-father that is stricken. The terrified wife looks on while the physician feels the patient's wrist, smothering her agonies as the children have been called upon to stay their plays and their talk. Over the patient in the fever, the wife expectant, the children unconscious, the doctor stands as if he were Fate, the dispenser of life and death. He *must* let the patient off this time; the woman prays so for his respite. One can fancy how awful the responsibility must be to a conscientious man; how cruel the feeling that he has given the wrong remedy, or that it might be possible to do better; how harrassing the sympathy with survivors if the case is unfortunate, how immense the delight of victory!

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## OCCUPATION FOR THE RETIRED MAN.

Victor Hugo, in graphic language, warns the successful man that when his ambition is accomplished and he is in a position to rest upon his laurels he is likely to soon terminate his earthly existence.

It is for this reason very desirable that the retired capitalist be given a task to perform that will not soon be completed.

For this highly desirable purpose there is probably nothing better adapted than reform politics. This occupation is not only praiseworthy, but it is likely to be a steady job, and, best of all for the purpose in view, it will bring into play a new set of emotions every week.

Given a self-made man who has

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worked his way upward from the depths of obscruity to commercial success, a man whose chief pride has been his reputation as a model of business honor, and you have the best possible conditions for carrying out this method of treatment.

For it will hardly become known that this eminent gentleman has set out to purify politics than he will begin to hear things about himself that will make sheep-stealing and pocket-picking seem polite eccentricities by comparison. The philanthropist in politics need never suffer from ennui.

To those physicians who would tenderly nourish an elderly patient who has retired with a competence, we suggest that they advise reform politics. There is nothing better calculated to dispel the feeling that one has outlived his usefulness. For, like the peacemaker, the reformer has a place all his own in the affections of the bystanders.

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## IN DEFENSE OF ALCOHOL.

The *Baltimore Sun* declares that alcohol among civilized white men, is the father and mother of joy—of innocent joy as well as suicidal joy. If it shortens life it also glorifies life. Against every man that it kills one may set 10,000 men that it makes happy. Against every home that it blasts one may set 10,000 homes that it mellows, pacifies and illumines with romance. Father, charged with a pair of cocktails, may be a foe to his stomach and his arteries, but he is certainly no foe to his young children, for he gives them 10 cents apiece and bids them be merry. The son of the house, inflamed with a highball, may show a congested nose, but blood is also flooding his heart, for doesn't he wait on his best girl, clasp her to his bosom, kiss her like a man and engage himself to her in honorable marriage?

What would become of romance if there were no alcohol? Imagine a tetotaler writing "Much Ado About Nothing," or the Fifth Symphony, or "Le Malade Imaginaire," or "Peer Gynt," or the Zend-Avesta, or the Declaration of Independence or any other great work of feeling and fancy! Imagine Wagner, bursting with ginger pop, at work upon "Tristan and Isolde." Imagine Leonardo, soaked in health drinks from Battle Creek, fashioning the unfathomable smile of Mona Lisa! Baxter, who wrote "The Saint's Everlasting Rest," was a "dry." Well, read his book—and then say when!

But great races, it may be argued, have pegged along without alcohol. Yes, but not without some other stimulant, some other poison. The Chinese lean to opium, the Malays to the betel nut, the Hindus to hasheesh, the Puritans drank blood. But the Turks—what of them? Well, let the Turks come into Court. They have no drama, no music, no poetry, no painting. They are strangers to romantic love. Not since the days of old Omar has the Arabic stock produced a first-class artist or a first-class man—and in Omar's time, as readers of the Rubaiyat are well aware, the grapevine, in Islam, was more than an ornamental shrub.

A poison! Certainly. But so are all other things that lift a man out of himself and make him soar and expand, and give him temporary forgetfulness of his wife's lack of beauty, his bank account's anemia and his own ungraceful figure, growing baldness and bad digestion.

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## PHYSICIANS OF THE ARTHURIAN AGE.

The *Boston Medical and Surgical Journal* calls attention to the fact that in the legendary romances of King Arthur and the Round Table physicians play but a very small part. That there were doctors in the historic days on which those romances are based is unquestioned. As in many primitive communities, however, they belonged to the priesthood and practiced their function of physical

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healing only as an adjunct or accessory to their sacred duties. The British druids and the Welsh bards were presumably the physicians of Arthur's time, and scanty references to them are still to be found in prose and metrical romance.

In the tale of Ywaine and Gawin is mentioned Morgan the Wise, who "prepared the ointment which restored Owain to a state of health and sanity." Merlin himself was somewhat of a physician, though his medicine partakes more of the nature of magic and incantation, like the charms and spells believed to [illegible] such potency in warding off dis- —to gleaf defending from wounds, or like there, and to which the old nurse brewed stacks of chaff! Iseult on their fateful marked or indexed, tha- able when needed, though on referred escaped since the annotation. Tud,

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keeping court at Whitsuntide at Cerlleon upon Usk. "And Arthur gazed a long time upon him, and was amazed to see him thus." And Edeyrn said, "I have met with much trouble, and received wounds unsupportable." And Arthur said, "Let this man have medical care, until it be known whether he may live." "And Arthur caused Morgan Tud to be called to him. He was the chief physician." And Arthur said, "Take with thee Edeyrn, the son of Nudd, and cause a chamber to be prepared for him, and let him have the aid of medicine as thou wouldest do unto myself, if I were wounded, and let none into his chamber to molest him, but thyself and thy disciples, to administer to him remedies. 'I will do so gladly, Lord,' said Morgan Tud." It is particularly interesting in this extract to note Arthur's admonition against intrusive visitors. Morgan's skill, or the vis medicatrix naturae, seems to aw[illegible] been efficacious, for Edeyrn was conscien[illegible]lly "healed of his grievous ing that he or that it mig- how harrassing same story Geraint himvivors if the case wounded by Gwalchmai immense the delight in) who, recognizing [illegible]wn opponent, brings Arthur. Geraint, [illegible]nue his quest in

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am, Lord,' said Geraint. 'I shall not believe thee concerning that, but the physicians that were with thee.'"

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## AN INTERESTING WILL.

The following text of a will, recently lodged for probate in Melbourne, is of some medical interest: "Being at this time in sound bodily and mental health, I hereby appoint my wise and most excellent wife sole executrix, trustee, and legatee of this, my will. Having promised my dead body to the Medical School for anatomical purposes at the Melbourne University, I desire that it be handed over to the order of the head of that school, whom I have requested to secure the destruction of the débris by fire before final disposal, according to regulations. This seems the only way: (1) It can be made to secure a useful purpose; and (2) besides will be a witness to my strong opinion that the State should exercise its admitted right to enforce a careful post-mortem examination of every dead body to ascertain the cause of death; my third reason, my protest against the foolish prevalent antipathy to giving over a body for this purpose. Very little consideration should suffice to convince anyone that were it publicly known that every dead body must undergo autopsy to ascertain the cause of death before its final disposal in any manner, murderers who have often entirely escaped notice by the neglect of that precaution, would find it impossible to continue their nefarious practices with impunity. Universal autopsy would thus be the best preventive of secret murder, and a decreased death-rate would perhaps show the extent of the need as well as the efficacy of the expedient. Having no property but my furniture, apparel, tools, watch, and library of books, I have made a catalogue so as to facilitate the sale."

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## THE REAL MEDICO-EDUCATIONAL GAUGE.

A writer in the *Physicians' Drug News* declares that the upper elate—"elite"—or whatever one may call those in the medical profession, who, through their influence in high touch medical societies, are seeking to control the making and qualifying of physicians, have some crotchets in their heads that must be knocked out if they are ever to become the practical men they are falsely seeking to evolve, and if the knocking knocks out their brains it will probably indicate that they are small and rattly and will not be missed!

One of these crotchets is their claim that education makes the physician, whereas education simply opens and illumes the way for the real physician to evolve from its chrysalos, the *real* physician being he who has made use of his knowledge in the genuine application of it. Supporting this claim that education is all, the fresh graduates in medicine are allowed to get by some State boards much oftener than well equipped graduates of experience who are ripe, yet who have remembered only the things that have a practical bearing on the practical work, which things are by these boards left out of the examination on purpose to trip him. It is easy to ask questions that have nothing but an educational value once known by the experienced applicant but forgotten because they ought to be, and so it is easy as well as fashionable for said boards to substitute pedanticism and superficial erudition for ripe experience and turn down the useful man for the infants.

The writer would not undervalue education but would strip it of all its unholy adornment to let it stand simply for what it is worth. Letting education stand on its own pedestal of real merit and it will never displace its votaries who have glorified it with the practical use of its qualifications.

"Knowledge is proud that he has learned so much; wisdom is humble that he knows no more."

Until a man reaches the wisdom station as indicated in this old aphorism,

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he has not reached his zenith of usefulness, and when to all appearances he has reached it, any body of men should be very slow to turn him down since, wherever you put him he is not of the sort that "strikes twelve and runs down!"

Give the ripe doctor a chance for his full proportion in every State, not because he needs it (though he probably does) but because the *State needs him!*

The physician who is his own authority is in the best position to succeed since the doctor's patients who have proper confidence in him want to know what *he* thinks ahead of any one else and soon lose some of that confidence when they find him quoting medical celebrities to them or reading to them from text-books Let us be so equipped that while avoiding the shores of pedanticism and the shoals of egotism, we may stand as our own authority to our own clientele. This means a responsibility that is great, but we must not shirk or shift it.

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### A CLEAN SHAVE.

A quarter of a century ago, says E. S. McKee, every doctor who could and a few who could not tried to raise a beard. Now nearly every doctor shaves. This is partially due to the aseptic craze which has swept the country and partially to the advent of the safety razor. Some old poet has said that is for their sins that men have shaving, too, entailed upon their chins. . In the past decade or two we have noticed very material improvement in the barber shops. Some associations of barbers have gone so far as to engage surgeons, members of that profession which left the barbers in bygone years, to teach them how to properly administer an aseptic shave, and how to use the general antiseptic precautions. The medico-legal side of the question has probably stimulated these associations of barbers to seek this instruction for several actions for damages have been brought to reimburse those who have contracted contagious diseases from allegedly careless shaving. To prove this connection might be difficult but the possibility of carrying numerous skin diseases is self evident. A "clean shave" should not only make the person shaved look clean but should also leave no disease behind. The hands of the barber and all his tools and appliances should, together with the face of the customer, be free from the germs which cause the disease. To destroy the germs either heat or antiseptics may be employed if of sufficient strength and duration. Towels should be used but once then sterilized. Particular stress should be laid on the fact that after a slight abrasion customers might infect themselves by rubbing the cut with dirty hands or handkerchiefs.

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### ANCIENT TREATISE ON ETIQUETTE.

Lewis D. Burdick treats of this topic in the *Dietetic and Hygienic Gazette.* The book or manuscript which is the subject of his comment dates in the last quarter of the fortieth century before the beginning of the Christian Era and belongs to the Third Egyptian Dynasty. The writer, Kaquemna, was a high public official under Sneferu, the Pharaoh of his period, who is known as the first of the monumental kings.

This treatise, or rather the part of it preserved, forms the first two pages of the celebrated Papyrus called the Prisse, after its discoverer, who gave it to the Bibliothèque Nationale, in Paris, in 1847. Although there are many inscriptions on stone more ancient, the Prisse is the earliest Papyrus yet discovered, and this belongs to a period more than a millennium later than the time of Kaquemna, the author of the first part of it. So that this fragment is not only the earliest known writing on the subjects upon which it treats, but it is also the oldest part of the oldest book in the world.

The opening paragraph is apparently an expression of the book itself of confidence in its own reception and value to

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those for whom it is written. It declares that a righteous song opens the enclosures of its silences, while the approaches to its repose are surrounded by words armed with knives against intruders, with no admittance except to those who come rightfully, alluding, as interpreted by the distinguished French scholar Virey, to the gateways of the field of Aalu in the under world, which are described in the 145th chapter of the Book of the Dead as guarded by gods armed with knives to prevent only those who are pure from passing.

The author sounds no trumpet call to reform by revolutionary and offensive methods. Epitomized, he counsels repression of one's desires that lead to excess, and conformity to social customs on public occasions. As one French scholar makes it: If thou art seated with an eater who eats so much as to be obliged to remove his girdle, or if thou drinkest with a drinker who hast received thee, and who would satisfy his taste as a crocodile does with meats, accept what he offers thee, refuse it not, however repugnant it may be to see a man get into a condition when he is no longer master of his speech. Maspero has suggested that this passage may refer to the Oriental custom of dividing a morsel with a guest to do him an honor, an offering which one is not at liberty to decline however unpalatable it may prove.

Moderation, toleration, self-control and charity, with neither self-righteousness nor disloyalty to one's ideals are the thoughts suggested. Affect to despise the dishes which thou lovest, says he; it is but a short time to restrain thyself, and voracity is a degrading thing and bestiality is in it. Let a little take the place of much; a glass of water quenches thirst; a mouthful of vegetables (melon according to Brugsch) strengthens the heart. He is a miserable man who is dragged along by the persuasion of his stomach. The stomach leads such people, and he who is driven by his stomach is ignoble, yet shrink not from meat in the presence of a glutton; take what he gives thee and refuse it not; the refusal would be disappointing, yet eating with a glutton and trying to keep up with him might lead thee afar.

As to a man without good breeding to whom all that one can say is without effect, who makes a surly recognition to the advances of a gracious heart, he is an affliction to his mother and his friends.

Do not be too modest and keep your mouth silent, but speak and let your name be known, without having pride because of thy power.

When one has acquired the experiences of life let him make it known to his children. They will honor themselves by heeding his counsels.

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## OLIVE OIL AND TURPENTINE IN TYPHOID.

Arnold, in the *British Medical Journal,* makes the statement that none of the various methods of treatment have hitherto been successful in definitely controlling the course or limiting the duration of typhoid fever. A measure employed at the Civil Hospital, St. Helena, during the past four or six years, has resulted in a distinct shortening of the average duration of illness, and in a remarkable amelioration of all the symptoms. This particular measure consists in the administration by the bowels of turpentine and olive oil from the first day of treatment, and its regular use at stated intervals until the temperature has been normal for at least after ten days. When the case first comes under observation an enema of turpentine ℥j and olive oil Oj is given by a funnel and tube. The foot of the bed being well raised, the emulsion is allowed to find its way slowly up the bowel. On the next day, or the day after, the same quantities are repeated. A preliminary thorough cleansing of the bowel by a dose, or preferably small divided doses, of calomel followed by castor oil, prepares the ground.

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# REFRACTION.

## DECENTERING OF LENSES.

A LENSE is said to be decentered when its optical centre (i. e., the centre of its curvature) does not coincide with the visual axis of the eye; and as the visual axis of the eye in a state of rest is supposed to pass through the geometric centre of the lens (i. e., the point which is equidistant, vertically and laterally, from the circumference), a lens is regarded as being decentered when its geometric and optical centres are not identical. When the optical center is to the inner side of the geometric center, it is said to be "decentered in"; when the reverse, it is decentered out."

### Prismatic Effect.

It can readily be understood that the effect of a spherical lens which has been decentered is that of a prism, because at any point in a spherical lens other than its optical centre the planes of the two surfaces of the lens are not parallel, but are inclined toward each other at an angle whose degree depends upon the degree of curvature.

When, therefore, the visual axis passes through the lens at any point other than the optical centre, the effect is the same as looking through a prism. Whether the prism so produced has its base in or out, up or down, depends upon whether the sphere is convex or concave, and upon the direction in which it is decentered. Since a convex lens is thickest at its optical centre, the base of the prism produced by decentering a convex sphere always looks toward the optical centre of the lens; hence, when a convex sphere is decentered in, the prismatic effect is that of "base in"; when it is decentered out, it is that of "base out". A concave lens being thinnest at its optical centre, the prismatic effect of decentering always has its base looking away from the optical centre; hence, when a concave lens is decentered in, it gives a prismatic effect of base out, and vice versa.

### Prescribing Decentration.

Inasmuch as a decentered sphere has the effect of a spherical lens of the strength indicated, plus a prism of the character and angular strength corresponding to the degree of decentration, and as it is often desired to combine a prism with a sphere, lenses are not infrequently prescribed to be decentered so as to give the required prismatic effect.

The stronger the lens, of course, the smaller the degree of decentration necessary to produce the same prismatic effect. The degree of prismatic effect produced by decentering a lens of 1 D. to the extent of 1 mm. is called the prism-dioptre or centrad. Hence, in determining the amount of decentration necessary to produce a given number of centrads with a lens of a given strength, we simply divide the number of centrads required by the dioptrism of the lens, and the quotient is the number of centimeteres of decentration necessary. For instance, if it is desired to produce 2 centrads with a lens of 4 D., dividing 4 into 2 gives .5; the necessary decentration is .5 cm., or 5 mm.

If the refractionist prefers to estimate the degree of prismatic effect in terms of the prismatic angle, then he has only to remember that a lens of 1 D. must be decentered 9.4 mm. in order to produce a prismatic angle of 1 degree. Thus, in determining the amount of decentration necessary, he multiplies 9.4 by the prismatic angle he wishes to produce, and divides by the dioptrism of the lens. For example, with a lens od 4 D. he wishes to produce a 2 degree prismatic angle; 9.4 multiplied by 2 is 18.8, which di-

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vided by 4 gives 4.7. The result in this case is in millimeters. The lens would need decentering 4.7 mm.

In prescribing this decentration of lenses, the refractionist may either indicate the prismatic angle or centrad he desires, or the number of millimeters he wishes the lens decentered.

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### TILTING THE LENSES.

It is plain that an ideal condition of perpendicularity is impossible, in the adjustment of glasses, for the lens can only be placed so as to be perpendicular to the visual axis when the eye is in one particular position, and any deviation of the eye from that position will disturb the relation. For example, if the glasses are adjusted so that the visual axes of the eyes at rest, i. e., parallel, cut the plane of the lenses at right angles, then the moment the eyes are converged the visual axes will cut the plane obliquely, and vice versa.

The best that can be done, therefore, is to adjust the glasses so that the vidual axes cut the plane perpendicularly when the eyes are in that position which most nearly corresponds with the use for which the glasses are intended.

If the glasses are to be used for distant vision, then the visual axes are regarded as parallel, and the lenses are adjusted in one plane, a vertical plane, at right angles to the axes. When the glasses are prescribed for near work, such as sewing, reading, etc., the inclination of the visual axes is calculated from the degree of convergence proper to the distance at which work is to be done, and the lenses adjusted in two opposite planes, inclined to each other, each at right angles to its visual axis. In cases where the glasses are intended for constant wear, the general rule is to adjust the lenses at right angles to visual axes at an inclination midway between the parallel and the convergence proper to the patient's working distance.

### DUST IN THE EYE.

A very common source of trouble to the eyeball, especially in large cities in these days of heavy traffic, is found in the clouds of dust that circulate in the air and lodge upon the conjunctiva. Those who wear glasses are more fortunate in this respect than their fellows whose vision does not require them to do so, for the lenses serve to keep out a great amount of dust.

The effect of this continued invasion of dust, in greater quantities than the tear-ducts and winkers can dispose of, is frequently to set up a mild chronic conjunctivitis. In some cases it induces a still more chronic process of productive inflammation, by which a web of tissue grows over the sclera, forming what is known as a pterygium. When this encroaches upon the cornea it gives rise to astigmatism, and has to be removed.

The only effective safeguard against the invasion of dust consists, of course, in the wearing of goggles. It is hardly to be expected, however, that the ordinary man will submit to any such unesthetic adornment, and most people will prefer to take their chances with ordinary precautions. Those who are out in the dust a great deal will find it beneficial to wash their eyes each evening, when they get home, with a copious instillation of boric acid solution, or other mild astringent.

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### FINDING THE NEAR POINT.

A method of ascertaining the near point described by Thorington consists in seating the patient so that the light in the room will come over his shouder and fall upon the card of test type held in front of him. The operator, to one side of the patient, holds the card in one hand, and a meter stick in the other, the eye which is not being tested being covered with a card blinder, and the patient is told to select the smallest type on the card which he can read or spell;

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and as he continues to do so, (aloud) the operator gradually approaches the card to the eye until the patient says the letters commence to grow hazy and he can scarcely decipher them.

Another way is to hold the card close to the patient's eye and gradually withdraw it until he can just recognize the letters; when this point is reached, the distance from the eye to the card is measured by the meter stick, and this distance, together with the size of the type which was read, is carefully recorded. For example, the patient selecting the type marked .50 and able to read it as close as 8 cm. and no closer, the record will be "near point equals type .50 D. at 8 cm." or, abbreviated, would be, "type .50D.=8 cm."

In some instances the patient may not be able to read any of the near type without the aid of a glass, and if so, it will be necessary to place a plus sphere in front of the eye to assist in finding the near point. For example, if a +2 S. were employed, then the record might be, "near point equals type .50 D. at 12 cm. with 2S." or "+2 S.=type .50 D. at 12 cm."

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### A HELP TO EYESIGHT.

Most people begin to notice failing eyesight at the age of fifty or a little sooner. Many people find their eyes "stuck up" in the morning and it is some time before they can see clearly.

Something can be done every day to benefit the eyes without taking up too much time, or interfering with other duties. Take a few drops of sweet oil, or any simple emolient, on the hands, and thoroughly massage the entire face, giving special attention to the region about the eyes. Do not rub the eyeballs, but carefully rub the tissues above and below the eyes with the end of the fingers, drawing the fingers away from the nose outward. Continue this some minutes, then exercise the muscles that control the eyeballs, by looking upward as far as possible, then downward, then sideways, in both directions. Do this at least once a day, and as much oftener as may be agreeable.

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HYDRARSAN is the name given by J. C. M'Walter (*British Med. Jour.*, June 17, 1911) to a compound of phenacetin, 10 grains, mercuric chloride, ⅛ grain, arsenic chloride, 1/10 grain, and potassium iodide, 5 grains. In syphilis, a few doses effect an apparent cure, but the remedy must be persevered with to prevent a relapse. Hydrarsan is given in solution, combined with tincture of cinchona.

LITHIO-LAXINE is an effervescing preparation containing lithium citrate, 5 grains, and sodium phosphate, 30 grains, in each teaspoonful. It is recommended as a liver stimulant.

PHAGOTAXINE is described as a saturated aqueous solution of oxygen, which is readily transformed into ozone under the influence of ultra-violet rays. It is used as an antiseptic application in boils, burns, etc.

PHENALETTES are effervescing "headache powders" containing a phenacetin compound.

SULPHOFORM is a trade-name for triphenylstibine sulphide.

VIN URANE (Pesqui) is a wine containing uranium nitrate, recommended for diabetes.

ZEOZONE is prepared from a derivative of æsculin, a substance which has the property of intercepting the ultra-violet rays of sunlight. It is used by Unna in the form of paste or ointment for the prevention of sunburn, etc. A stronger preparation, *Ultra-Zeozon* is used for chapped skin, frost-bite, etc.

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# THE SICK ROOM.

## BATHING IN TYPHOID.

FRANK S. MEARA, in the *Journal of the Medical Sciences,* thus describes the technique of bathing the typhoid fever patient:

The patient's nightshirt is removed, his genitals covered with a napkin, bound about the body, or the whole body covered by a sheet, under which he is bathed, which later method is a little more awkward. He is given a half ounce of whisky, or a cup of hot strong coffee (4 ounces), the face bathed with cold water, a folded bandage a couple of inches wide, bound around the forehead and tied below the occiput, to keep the water applied to the head from running into the eyes and streaming down the face, and he is then ready to be lifted into the bath. To do this, the best way is for one attendant to rest the patient's head on one arm while he raises the upper part of the body by lifting under the shoulders, while another attendant lifts the lower extremities, the patient being requested to stiffen himself out.

Another method, which has advantages if the patient is very stuporous, is to spread a hammock netting under him or a strip of canvas with straps tatached, and lift him on this into the tub and by the same means out of it. The head should rest on a water-cushion ring or air-ring.

As soon as the patient is immersed in the bath, the equally important part of the procedure is begun—the friction, gently applied (not kneading) to all parts of the body except the abdomen. The back must not be forgotten. At intervals during the bath, cold water, at 50° F., should be poured overe the head. While in the bath the bed should be prepared for his reception, by placing on it a double blanket, on the side he will occupy; a pillow is covered with a towel, the blanket is covered with a linen sheet, and hot water bottles are placed at the foot.

The patient is then lifted onto the bed, the napkin is removed, and he is surrounded by the sheet, the edges and ends being tucked about the neck and under the arms. He may be allowed to lie in the sheet for five or ten minutes and then dried with soft towels, or more immediately if the temperature is low and he is shivering. The tub is best emptied by a siphon.

The temperature of the water Brand set at not more than 70° F., and not less than 65° F. The frequency he advised was every three hours, if the rectal temperature was above 102.5° F.; the length of the bath, fifteen minutes. These rules laid down by Brand have met with but slight modifications where satisfactory results are obtained. Slightly lesser temperature of water is used at times, a little higher temperature of the body taken as the indication of the bath, and the initial bath begun at a milder temperature. At St. Luke's Hospital, in New York, the tub bath is given at 80° F., and in selected cases as low as 70° F. The bath is continued fifteen minutes. It is given every four hours, if the rectal temperature is 103° F. At the Presbyterian Hospital, in New York, the tub bath is given at 85° F. for ten to fifteen minutes, at four-hour intervals, if the body temperature is 102.5° F.

It is fully appreciated by the advocates of the Brany system that the reaction to a bath at 65° F. cannot be anticipated in markedly toxemic cases, so that a patient seen in the third week or latter part of the second, who is very toxic, should be subjected to a bath of higher temperature (75° F. or 80° F.), and for

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a shorter time. Our hospitals rarely get patients in the first week, and the higher temperatures adopted are better suited to their class of cases.

If a tub bath cannot be obtained, a substitute for one can be constructed in the bed by running a clothesline around the bed, at a suitable height above its level, attaching a rubber sheet to it by clothes-pins, thus making a tub of the sheet. Other contrivances can be resorted to, to approximate a tub in the bed, as building around the sides and foot and head with rolled blankets, and the use of the rubber sheet as the receptacle for the water. When the patient is put in the water one expects a sudden shock, deep breath, and gasping. These are in themselves beneficial. The patient may shiver, the skin may be shrivelled, and the nails cyanotic, and yet not contraindicate the bath; but if the face is cyanotic, shivering marked, and chattering of the teeth occur, and the patient does not react well on being taken from the bath, then the next bath should be at a higher temperature and less long. Cyanosis of the face or threatened collapse should lead to immediate removal of the patient, warmth to the body externally and internally, and stimulants—hot coffee or hot whisky.

Many untoward symptoms in the bath are due to failure to appreciate the value of, and failure to apply properly the friction during the bath.

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## USE OF THE HOT WATER BAG.

Emily Bleazley, in the *British Journal of Nursing,* says: To make your bag last as long as possible never fill it with boiling water. The water may be quite hot up to 200 degrees Fahr., but not boiling, as it swells and cracks the rubber. Never fill the bag while the kettle is on the fire or gas; thus bringing the bag close to the flame and risking burning it. But take your kettle off. Stand it on one side for a few minutes, or quicker, add a little cold water, and then fill your bag, first taking care to press the air out so as to avoid the splashes. The bag must then be put in a flannel cover and applied wherever required.

If the patient is quite conscious and able to move her limbs, etc., freely, she may, if she wishes, have the bag with its flannel cover next to her nightdress. But in cases where the patient is paralyzed, unconscious, under, or just coming round after an anæsthetic, the bags should never be next her, but must have a good thick fold of blankets between.

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## POINTS IN THE CARE OF THE NEWBORN.

The *Nurses' Journal* of the Pacific Coast offers the following suggestions:

When urination is delayed immediately following the birth, try a warm sitz bath for the baby and give plenty of water, not too cold, to drink.

When the baby suffers frequently from colic and is troubled with rumbling in the bowels and general restlessness, an irrigation of the colon with salt solution, using a medium sized soft rubber catheter, will usually give relief. The solution should be injected a little at a time and continued till it returns clear.

The weaker the baby the more it becomes exceedingly important to prevent heat loss. To keep the baby thoroughly warm, to prevent chilling at any time, and to keep the supply of air pure, are all important points to be watched.

When the cord remains constantly moist a washing with alcohol, about 95 per cent., will help to improve conditions. The navel should always be regarded as a wound, requiring the most exact surgical cleanliness.

When the baby has difficulty in nursing, the application of a hot fomentation to the breast before each nursing, over the nipple, will help to lessen the trouble by bringing the milk to the surface.

A great deal can be learned as to the child's condition by carefully observing stools. The normal stool in the newborn

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is dark-green for two or three days, gradually becoming brown. The change from brown to yellow is gradual, and by the end of the first week the stool should be a golden yellow. When a baby is not getting sufficient food the color of the stools will remain brownish rather than yellow.

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### A CASE OF CONVULSIONS.

Dr. A. K. Gordon, in the *British Journal of Nursing,* admonishes that when the nurse sees a patient for the first time after any fit, she should endeavor to obtain a specimen of the urine for examination, as a convulsion is not infrequently the first sign of grave disease of the kidney, which has not previously given rise to any symptoms except general ill health. If the urine be not examined, it is quite easy to mistake the case for one of epilepsy or even hysteria. This error is a very grave one as far as the patient is concerned, for it means that no attempt would be made to eliminate the uræmic toxins by hot packs, and so on.

It is also very important that the nurse should observe—when she sees a patient in a fit—in what group of muscles the convulsions begin, and whether they are confined to that group or become generalized. Convulsions that begin and remain in one part of the body point to the existence of an irritant, which is annoying one particular part of the brain, so, in such a case we are often able to determine what part of the brain is affected, and if that part is in an accessible situation, it may be possible to cure the patient by removal of the irritant.

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### THE "NEIGHBORHOOD SYRINGE."

The Bulletin of the Indiana State Board of Health prints a timely satire on this subject. Where, it inquires, is the neighborhood syringe Have you seen it going the rounds? Of course you have, for you just passed Mother Smith with it under her apron, yet enough of it exposed for your experienced eye to recognize. Mrs. Smith had just been to neighbor Brown's and had there borrowed it to take home to give her daughter, Matilda, an opium and starch injection for the bloody flux. How busy it is kept.

What a time-honored old rubber pump it has become! What a varied service it has rendered. How often it has fought the field of constipation, and brought the obstinate, tight, refractory, and pellet-pelted bowels to a generous laxation! How often it has faced the dangers of the unseen micriscopical world, and flushed away, and scattered the enemy without knowing even the A B C of the germ theory! How often it has successfully succeeded in deluging a colony of gonococci who felt their vaginal haunts of stygian darkness well nigh impregnable, and the fluted, tucked, strictured and tortuous spermatic outlet past finding for a through passage! How often is rhythmic gushes, in blissful ignorance have prevailed on theappendix vermiformis to nestle down and be good, the growing host of appendix amputators saith not! Its watery broadside projected against the ubiquitous communis coli, and its defensive and offensive douching of the nasal cavities for catarrhal affections real or imagined, are to be mentioned among its exploits.

Brave old battle-scarred squirt gun, having had a personal acquaintance with grand pere and grand mere, the parson and the harvest hand, Aunt Betsy nd Mary Jane, sweetest Susan and rollicking Tom, and the children including the babies, thou hast finally succumbed to valvular disease, a sort of endostosis, and also a touch of arterio-sclerosis. *"Requiescat in pace."*

Mild mannered, quiet, a servant of the people, accepted ever as a harbinger of peace, yet a thing of evil, a sower of disease, a secret Herod, and a constant offender against the surgical and sanitary

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code of cleanliness, the high standard of medical science demands your demise.

What a history of neighborhood troubles and scandals this accommodating syringe would unfold in the laboratory of the bacteriologist, as layer after layer of it saccretions should become exposed to the high powers of microscopic vision, or be roused to vehement action by an agar-agar culture tube.

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### EFFECT OF COLD APPLICATIONS TO THE ABDOMEN.

From a summary published in the *Hospital* we learn that in the *Münchener Medizinische Wochenschrift* Dr. Riehl contributes an account of his researches to determine the effects of cold external applications in lowering the internal temperature of the body, especially in regard to the stomach. As the details of the experiments are of no particular importance to our readers, we give only the general conclusions. It was shown that ice-cold applications to the abdomen produced a lowering of the temperature of the stomach 1.8° C., or about 3.2° Fahr., while the rectal temperature was lowered about 2° Fahr. The author infers from these facts that in herorrhage from the stomach it will be advisable to apply ice to the abdomen, because a fall of three degrees in the temperature of the stomach will promote the coagulation of the blood by reducing the quantity of blood in the gastric vessels and by its reflex action on the vaso-constrictor nerves. This is another instance in which scientific experiment has proven the efficacy of rational nursing methods.

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### STANDARD BREAD.

W. Harrison Martindale, of Marburg, thinks the physician may possibly be confronted with inquiries as to what "Standard" bread really is, what its advantages are and its disadvantages. At the risk of being told that this subject has nothing at all to do with the chemist and druggist's work the following few remarks on these aspects of Standard bread may be offered. First of all the "manifesto" by some of the highest medical authorities defines Standard bread as "bread made from unadulterated wheat flour containing at least 80 per cent. of the whole wheat, including the germ and semolina." Those desirous of refreshing their memory as to the structure of a grain of wheat would do well to glance at the excellent diagram facing p. 266 in Jago's "Science and Art of Bread-making." The pictures showing the situation of the "germ" in the grain enables one to understand the reason why the germ is in great measure winnowed away by the roller process of milling. The above definition is quite comprehensive to us as chemists, but the word "semolina" might just as well have been omitted for the simple reason that it may refer to the most various products according to the fancy of the miller. Semolina of wheat is the hardest portion of the endosperm, and is obtained in a granular form by adjusting the rollers sufficiently far apart so as not to crush the granules. This is the semolina that we know any buy in the shops. It is usually prepared from the hardest wheats —*i. e.*, those grown in Southern Europe. The modern roller mills convert the wheat into flour and "offal." Flour for Standard bread has *ipso facto* to be ground or crushed between the old-fashioned mill stones, thus the product retains the bulk of the grain. Most modern millers in London do not possess stone mills at all. Those who do have recently been putting the old plant to good account. The *germ* differs remarkably in composition from the other parts of the grain. I have placed side by side (from Jago) the amounts of certain constituents of a wheat mixture, the results of analysis of one of the semolina products—that coming from the second and third "breaks" of "flattened" germ from the same mix-

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ture, and an approximation of the contents of bran:

| | Wheat. | Semolina. | Flattened Germ. | Finished Bran. |
|---|---|---|---|---|
| Moisture | 12.09 | 12.6 | 11.42 | 12.11 |
| Soluble extract | 5.18 | 4.0 | 33.3 | 9.33 |
| Soluble proteid | 1.38 | 0.94 | 11.76 | 1.20 |
| Crude gluten (dry) | 6.04 | 5.72 | None coverable | None coverable |
| Ash | 1.53 | 1.0 | 4.17 | 6.77 |
| Phosphoric acid | 0.78 | 0.22 | 2.43 | 3.89 |
| Fat | 1.58 | 1.26 | 9.076 | 1.53 |
| Cellulose | 3.06 | 3.72 | 3.62 | 18.3 |

With regard to the mineral constituents of wheat, Allen (vol. i., p. 446) gives a table showing the percentage of ash in nine fractions obtained by grinding wheat containing 1.6 per cent. approximately of mineral matter. The first three products constituting fine flour contain 0.483 per cent., and these three products constitute 80 per cent. of the weight of the original grain, representing the composition of good "seconds" flour, and even when we add the next two products the "tails" and the "fine sharps" or "middlings" we only make up 0.723 per cent.—*i. e.*, more than half the ash remains in the products called "coarse sharps," "fine pollard," "coarse pollard," and "long bran." We often read of the "bone-forming" constituents of this ash. Lime, it appears (Allen, p. 447), ranges from 1 to 10 per cent. Magnesium gives an average of 12.11 per cent. magnesium oxide. Silica in the ash rarely reaches 5 per cent., being usually less than 2 per cent. $P_2O_5$ constitutes an average of 49 to 50 per cent. of the ash.

Feeding experiments on animals have proved that white bread from which the germ has been extracted does not provide so much nutriment. It is quite conceivable that the removal of the whole of the bran layer which contains so large a proportion of salts (see table), and which may be deemed "bone-forming" constituents, is an erroneous proceeding. The chief difficulty regarding the respective merits of ordinary and Standard breads is the determination of their physiological values. Eminent physiologists have not been able to agree upon the subject.

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### A THERMOMETER RETAINER.

J. Leslie Barford, R. N., reports to the *Lancet* that he has devised a very simple preventive for the promiscuous slipping out of clinical thermometers from between the lips of careless patients. It consists of about ⅛ in. of stout rubber tubing of about 3/10 in. diameter, but with a very small lumen, such as forms the essential part of a Foulis' tourniquet. This ring is moistened and passed over the bulb of the thermometer for a distance of an inch or slightly more. Many thermometers have a natural groove here. When the thermometer is put in the mouth of a patient the ring lies between the lips and teeth and is a very material help in retaining the instrument even should the lips be slightly parted. The rings cost next to nothing—one spare bit of tourniquet tubing could be cut up with a sharp knife into dozens of them. They can be detached with the greatest ease, but there is no obvious objection to their remaining on the thermometers and soaking in the disinfectant in the ward; but in this case a practical point is to employ a vessel with a brim wider than its base. Otherwise, in quickly withdrawing a thermometer, its ring may catch in that of another and drag it out of the vessel with disastrous results. This very simple device should prove useful in out-patient departments or in establishments such as a boys' training ship, where the temperatures of more or less casual patients are constantly being taken. While in use in the sick bay of the author's ship not a single thermometer has been broken by being dropped from a boy's mouth—hitherto a frequent accident.

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# MEDICAL PHARMACY.

## MITHRIDAT AND THERIAC.

NO PREPARATIONS have been better known in medicine and pharmacy from antiquity to a comparatively recent period than the two known as Mithridat and Theriac. The first derived its name from Mithridates, King of Pontus, who lived in the first century before the Christian era, and of whose courage, bodily strength, skill in the use of weapons and learning the most wonderful tales have been told. This king is said to have devoted much of his time to the study of the magic arts, the interpretation of dreams, and various other superstitious ceremonies. One of his passions was to experiment with poisons with the object of discovering or devising antidotes against their action; he used criminals and animals for the purpose, and his search was rewarded by the discovery of a number of specific antidotes, which he combined into an electuary to serve as an antidote to all known poisons. Pliny tells us that this electuary consisted of rue, nuts, figs and salt.

Plutarch expresses the opinion that it was by no means a zeal for knowledge that inspired the king in his studies into the action of poisons, but rather a fear of being poisoned himself, for he was a cruel tyrant and like all despots was surrounded by enemies, avowed and secret. He constantly took his famous antidote and finally rendered himself immune to such a degree that when, after his defeat by Pompey in 62 B. C., he attempted to poison himself, rather than fall into the hands of his conqueror, the poison, which he constantly carried about with him for use in an emergency of this kind, failed to act, and he was compelled to call upon a Gallic mercenary to dispatch him with his sword.

Galen has preserved a number of prescriptions said to have been devised by the king, the most famous of which is for the preparation of the *antidotum Mithridaticum*. A number of versions, all differing from one another, exist (Galen himself gives four variations), which leads to the conclusion that the original formula—if it ever existed—was lost. The best known of these versions is that of Damokrates, which calls for fifty-five ingredients; it ends with the words:

"Mythridat est in qualitate et virtute Theriaca et parum different. Nis forte quod Theriaca est parum calidior et potentior contra venenum serpentinum."

I. e., Mithridat is next, in quality and excellence, to Theriac, and the two differ but little, except that Theriac is a little less rapid and powerful against the poison of serpents.

The Theriac of Damokrates attained to a fame greater even than that of Mithridat, and, in the course of time, became more subject to changes in composition than did its companion preparation. There is still in existence a work by Nikander, a Greek of the second century B. C., entitled "Theriaka" and containing a description of poisonous animals, the action of their venom and the proper antidotes thereto. Of these antidotes some were simples while others were of a complex nature. The following may be taken as a specimen of the vile concoctions of the time: serpents caught at a cross-road, were boiled together with the marrow of a bullock, rose oil, olive oil and wax until the flesh separated from the bones. This mixture was then rubbed up into a smooth ointment, with which the body of the person suffering from poison was anointed. As an antidote to the bite of a deadly viper, Nikander recommends an infusion, in wine, of *Centaurea chironii*, a similar

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preparation of aristolochia, the whole plant being used. As an antidote to all kinds of poisons Nikander mentions scraping from the cadaver of a weasel, which has been deprived of the intestines and dried in the sun; these scrapings were placed in wine and drunk For the same purpose were used the dried blood of the tortoise, castoreum, frogs, the testicles of the hippopotamus and other similar delicacies. The effect of insect stings was counteracted by the application of leeches and a poultice composed of goat's dung and wine.

**Theriac of Andromachus.**

Theriac of Andromachus derives its name from Nero's body physician, who originated a number of formulas, and at his death left three works treating of remedies for all diseases of the human body. He modified the formula for Mithridat by adding to it a number of constituents. This modified formula has been preserved for us by Galen. It appears to have been originally written in verses and was dedicated to the Emperor Nero, whom the author addressed as "the dauntless giver of all freedom." The principal constituent of this mess was the flesh of serpents which were caught at particular seasons and were prepared for the boiling pot with the observance of many kinds of strange precautions. The compound was administered in the form of pastilles or troches, which became an important article of commerce. The dealers in these pastilles were called *trochistes,* and their duties were described as follows by Dr. Ludwig Harnack in his "Vier Fragen die Apotheker und Materialisten Betreffend" published in the seventeenth century.

The business of the trochistes is to furnish the apothecaries cheaply with all sorts of *materialia* (drugs, etc.) besides *trochisci de viperis,* or pastilles of serpents' flesh, which they imported from Italy, and on account of which they were called *trochistes.*

It has been suggested, by the way, that the word *Drogist* (druggist, a dealer in drugs as distinguished from the apothecary) may have been derived from *trochistes;* but this is very questionable for the word drug is probably of altogether different origin.

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## SYNERGISM AND THE FULL UTILIZATION OF DRUG ACTIVITY.

The *Medical Record* points out that while synergistic drugs have been used intelligently for decades, their employment has been largely empirical. Purgatives, for example, have usually been given in combination, first upon the merely cumulative plan, and later in order to combine remedies which act upon different portions of the alimentary canal, or which induce purgation in different ways. Combination naturally favors economy in the use of the individual drug, since the single dose can thereby be made smaller; and it is probably true as a general proposition that two drugs which act well as synergists will not exhibit any parallelism as to unpleasant overaction, collateral effects, or sequelæ. It not infrequently happens that good synergists neutralize the undesirable effects of each other. Synergists occur side by side in drugs—as morphine and codeine in opium, strychnine and brucine in nux vomica; and pharmacists have striven for years so to manipulate fluid extracts as to eliminate all but the synergistic ingredients, thereby getting rid of useless ballast and non-synergistic active principles. With the great development of synthetic remedies it has also become possible to introduce the principle of synergism in this field. With all these advances, however, little has been done in the exact quantitative or biometric direction. Bürgi of Berne has devoted much time and labor to pioneer work in what he calls "the action of mixtures. One of his articles appears in the *Berliner kinlische Wochenscrift* for May 15. His work is founded on hundreds of

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experiments and his results often differ greatly from theoretical deductions. Thus if x is a narcotic drug, Nx may represent the minimum narcotic does when given alone. If y is a second narcotic drug Ny represents its minimal does. In theory a combination would be represented by ½ Nx + ½ Ny. But experiment shows that ¼ Nx + ¼ Ny will give the desired narcotic effect. Thus in combination each remedy doubles the activity of the other, so that the actual amount of medicine given is practically decreased by combination. Even more surprising effects are in evidence if one drug is somewhat increased while the other is greatly diminished. Thus, Bürgi has obtained narcosis by such formulæ as these: 2/5 Nx + 1/25 Ny; ¾ Nx + 1/000 Ny, and ½ Nx + 1/80 Ny. This principle is in evidence throughout the entire domain of therapetutics. The remarkable effects of certain mineral waters are set down in part to the synergism of small amounts of salts in solution. It would seem as though terms such as synergism and full economy of drug power are hardly strong enough to do justice to such remarkable "phenomena." It may, perhaps, be more fitting to state that a certain quantity of one drug is able to activate a certain quantity of another drug, using the verb to activate in the ordinary biochemical sense.

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## THE ANOINTING OIL.

The employment and composition of the anointing oil which was used in the ceremony of the Coronation of King George V. at Westminster, says the *Chemist and Druggist,* have been the subject of several notes in the daily papers. The matter is interesting to chemists and druggists from the fact that the preparation of compound oils and incense for ceremonial occasions is among the earliest duties of apothecaries mentioned in the Bible. The Old Testament does not distinguish between oil and ointment, the Hebrew word *shemen* being employed for both, hence the general modern distinguishing feature of solidity for an ointment and liquidity for an oil cannot easily be traced. It is certain, however, that oil was employed for many purposes in the East as an anointment. For personal use oil was rubbed on the body with the idea of promoting health and comfort as well as improving the appearance. On festal occasions anointing with oil was practiced as a token of welcome, and the funereal employment is well understood. There are several instances in the Bible of the medicinal uses of oil, but as a symbol of the setting apart of a person for a particular office, as in the Coronation, the rite is taken from the ceremony of the consecration to the priesthood. The two offices of the priest and king were often combined in ancient times. Pure olive oil was originally used for anointing and for burning in the Temple, this being prepared for religious purposes by bruising the olives in a mortar and straining off the oil. It is stated in Exodus that this oil does not produce soot when burned in the sanctuary. Very early in history the introduction of fragrant ingredients was practiced. When the Tabernacle was built in the Wilderness it is related in Exodus that a specially mingled oil was to be reserved for the purpose of anointing Aaron his sons, and it is further related that Bezaleel, the principal architect, had the oil prepared under his superintendence by the apothecary. The recipe is thus given in the Bible.

"Take thou also unto thee principal spices of pure myrrh five hundred shekels, of sweet cinnamon half so much, even two hundred and fifty shekels, of sweet calamus two hundred and fifty shekels, and of cassia five hundred shekels after the shekel of the sanctuary, and of oil olive an hin.

"And thou shalt make it an oil of holy ointment, an ointment compound after

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the art of the apothecary; it shall be an holy anointing oil."

Further on the use of the oil for any secular purpose or on the person of a foreigner or the imitating of it in any way is strictly prohibited. It is not difficult to translate the recipe into modern terms, there being only a little doubt in regard to the myrrh; it may have referred to Mecca balsam and not the myrrh of pharmacy as known at the present day. The shekel was equal to 252⅝ grains, or half that weight if the light shekel is intended. Sixty shekels made one mana, the light mana being interesting because it was perhaps the origin of the pound weight in use in this country. The hin of olive oil was about twelve pints, the Hebrew liquid measure being twelve logs one hin, six hins one bath or ephah, and a log has been identified with the Roman sextarius (0.99 pint). The method of compounding the holy oil was by boiling the ingredients together, a hint of this being given in another part of the Bible and in the writings of Maimonides. In regard to the modern method of compounding the anointing oil, this is entrusted to the King's chemist and druggist. The late Joseph Ince related in *The Chemist and Druggist* some years ago circumstances which showed that Godfrey & Cooke were the compounders of the oil in the seventeenth and eighteenth centuries. It may be taken, however, that the thirty ingredients are mythical, and if professional etiquette permitted it to be disclosed, it would probably be found that the formula is a simplified version of the Biblical recipe, the "art of the apothecary" having advanced since then, and shown the way to prepare the fragrant oli without the tedious process of boiling the ingredients in olive oil.

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## AN OPINION ON ALCOHOL.

At a recent meeting of the Paris Academy of Medicine Dr. Havist read a paper giving the result of researches made by him regarding suitable beverages. He reminds us that water is found in all beverages such as wine, milk and beer, as well as in vegetables, while practically the whole of the civilized and uncivilized worlds alike use it largely for drinking purposes. Dwelling on the subject of alcohol, he refuted the idea that it should be considered as a poison, and expressed the opinion that an average man can safely take as much as 35 ozs. of it daily, provided he is engaged in hard physical exercise.

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## WITCH HAZEL.

Some years ago, says Howe, in the *Eclectic Medical Journal* of 1888, I was visiting an uncle in Massachusetts, and while there I saw three or four men slowly pacing a piece of ground on a side hill a short distance away. I asked what the solemn appearing individuals were about. After being told that the elder of the group, who held a crooked stick in his two hands and watched the wand very closely, was a "locator of wells" and "finder of hidden treasure." I hastened to the scene with a view of learning the secret, or what I could in regard to it. I had heard of the mystery before, but had never seen the practical working of it. The wand was forked and of green hazel; the diviner's hands grasped the two branches of the stick, and the body of the little tree—the thickness of the thumb—stood upwards, when the implement had been properly manipulated and was in condition for the subtle action. The forked hazel stick was called a "divining rod" or "the witch's puzzle." When the bifurcate hazel stick had been grasped and held for manifestations and demonstrations, the front aspects of the hands did not face each other, but the *backs* were turned to one another, the little fingers being uppermost. Now, if anybody will thus grasp the forks of a "divining rod" made of apple tree, alder, or birch, and have the central stub or stump a foot long,

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the weight of it will incline the stalk to tip one way or the other; and if the wood be freshly cut, and the hands clutch the forks with firmness, the twisting force will wrench the green bark from its foundations. This part of the trick ends the experiment, and demonstrates the fact that a good spring of water is not far under ground. And what is a clincher of the feat, the sinkers of a well are about sure to find an abundance of pure water if they go deep enough into the earth! In the case referred to, the manipulator of the divining rod received a fee of three dollars. He had been summoned a distance of a few miles, and the owners of the land, who desired a good well for watering grazing cattle, were among the most intelligent and carefully educated in New England. To question the propriety of thus having a spring scientifically located would be to risk the reception of a severe rebuke! In Nebraska I saw a split piece of whalebone employed as a divining rod to locate a spot to be bored for water. The user of the implement received five dollars for his services. A doubting Thomas had the hardihood to say that a bore a hundred feet deep, more or less, the variation depending upon the surface, whether on a ridge or in a hollow, would surely strike a bed of gravel in that part of the country, where water existed in the greatest abundance. The bore was made with what are called "drive-wells," sections of iron tubing were driven into the earth till water flowed from the top segment. The "diviner" was engaged mostly in locating the presence of valuable minerals; and if his word could be credited, he never failed to find gold, silver, or lead in soil where the rod "worked" in his hands. The "rod" was made from a piece of whalebone about fifteen inches in length, and split from one end to within five or six inches of the other. A copper ferule enclosed the wand at the point where the split terminated. I believe the ring of metal was to prevent the whalebone from splitting into two parts. The diviner remarked that he had to employ a leaden ring when testing for copper! Thus it is ever with diviners, they know the worth of mystification and how to practice deceit. They understand the gullibility of human nature. It seemed to me that the Nebraska *diviner* employed forked whalebone because green witch-hazel did not flourish thereabouts. A fakir has to conform to the necessity of circumstances. If a witch cannot find a hazel bush with which to make a wand, she can impart potency to a forked stick of any other tree or shrub But the hazel sprout is the one fancied by writers upon witchcraft.

* * *

## YOHIMBINE.

Yohimbi is the bark of *Corynanthe yohimbi,* Schum. (Rubiaceæ), a plant growing in the southern district of the Cameroons, West Africa. Its aphrodisiac properties are known to the natives, who employ a decoction of the bark for this purpose. Spiegel, in 1895, separated from this drug an alkaloid, *yohimbine* (known also as *Aphrodine, Corymbine,* or *Corynine*), which has been found to possess the properties of the bark in a marked degree. It has also a local anæsthetic action similar to cocaine.

Yohimbine hydrochloride, the salt employed in medicine, occurs as colorless crystals, slightly soluble in water. It may be administered as a one per cent. solution, either by the mouth or hypodermically. Tablets are also prepared containing 0.0055 gramme (1/12 grain). The dose of yohimbine hydrochloride is from 0.0032 to 0.01 gramme (1/20 to 1/7 grain) or 5 to 15 minims of a one per cent. solution.

The aphrodisiac properties of yohimbine have been taken advantage of in veterinary practice, where it has been extensively and successfully employed for breeding purposes. In the human subject it has found useful application

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in nervous diseases of many kinds. In various forms of neurasthenia it has been found to act well, and in functional disorders attending tabes dorsalis it has given good results. It may be tried in all disorders due to neurasthenia, or in which neurasthenia is a symptom, such as diabetes mellitus, and various female complaints.

In administering yohimbine, care should be taken to begin with a small dose and increase very gradually. Certain by-effects are sometimes seen, such as hyperæmia of the conjuctiva, vertigo, palpitation, and insomnia. Should these appear, idiosyncrasy is indicated and the drug should be stopped. In nervous and excitable patients the drug should be given with special caution. It is contraindicated in chronic inflammation of the pelvic organs, endometritis, and chronic prostatitis, also when the kidneys are affected. Three tablets daily are usually sufficient, or less may be given to begin with. When this quantity does not produce the desired result the drug may be given hypodermically, o.5 to 1.0 c.c. of a one per cent. solution being used. Careful and suitable diet should be enjoined, and alcoholic beverages forbidden or greatly restricted during the treatment.

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## FEHLING'S SOLUTION.

If Fehling's solution be prepared and kept in one bottle, it is apt to deteriorate, hence it is best preserved in two bottles, as follows: :

1. Copper sulphate.....505.9 grains
   Water to make..... 1 pint
2. Rochelle salt..... 6 ounces
   Sodium hydrate.....730 grains
   Water to make..... 1 pint

In a test-tube add about one drachm of 1 and 2 and dilute this with an equal quantity of water. Urine is carefully added and the solution boiled. If sugar be present, a play of colors ranging through green, yellow, orange and red is observed.

Fehling's solution is hard to keep. Albumin must first be removed by coagulation by heat. Ammoniacal urine must first be boiled with caustic potash, it may then be tested for sugar. Turpentine, chloral, camphor, cubebs and copaiba also reduce copper.

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## NEW REMEDIES.

ADIPOL is a new mineral ointment-base, said to yield an ointment equal in every respect to those prepared with lard; it absorbs 30 per cent. of its weight of water. It is prepared in both white and yellow varieties.

ASPERGOL is described as a coal tar compound, and is recommended in the treatment of rheumatism and allied complaints. It is put up in the form of sugar-coated tablets.

CITROSPIRINE is a compound of acetylsalicylic acid and caffeine citrate.

DIORADIN is the name given to the "radio-active menthol-iodine" remedy for tuberculosis recently announced in Paris.

ENDITIN is a name given to a make of pure tuberculin.

EREPTONE is obtained by the action of the juices of the pancreas and intestine on lean meat. It is used for rectal feeding, being given as a 5 to 10 per cent. solution.

FORTOSE is a untrient preparation, said to increase the appetite and assist digestion, so that a larger quantity of solid food may be ingested by a weak stomach without discomfort.

GLANDULEN is described as a preparation of the bronchial glands of animals, and is recommended as a remedy for tuberculosis.

GRAVIDIN is a fluid extract of a species of *Fucus,* recommended in vomiting of pregnancy.

HEXAMETHYLENE TETRAMINE DIGUAIACOL is a substitute for guaiacol, similar to the triguaiacol compound already described. It contains 65 per cent. of guaiacol, and its trade name is *Hexamekol.*

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# THERAPEUTIC BRIEFS.

**Skin Diseases.—**

All forms of cutaneous affection respond more readily to treatment by local remedies after preliminary congestion by Bier's method. It increases the blood flow and improves the nutrition of the affected region. Acne, lupus, and psoriasis are all benefited by this method.

**Infantile Diarrhea.—**

In early acute cases seen during the active period, and in the chronic cases where blood and pus persists in the stools after fever and toxemia have disappeared, irrigate the colon with a 3 per cent. solution of nitrate of silver.

**Miscarriage.—**

Potassium chlorate is efficacious in these cases. It will also stop uterine hemorrhage and reduce the size of a subinvoluted uterus. In habitual miscarriage, this drug, given in 5 grain doses three times daily and continued throughout pregnancy will produce no untoward effects and be followed by normal labor.

**Measles.—**

During the first four days, commencing at the earliest possible moment, rub pure eucalyptus oil gently all over the body, morning and evenings. Afterwards, repeat it once a day until the tenth day of the disease. Under this treatment, secondary infections never occur and complications are unknown.

**Diabetes.—**

The following is Professor Arloing's formula for the sesame emulsion recommended by him in the treatment of diabetes: :

| | |
|---|---|
| Oil of sesame | gms. 600 |
| Water | gms. 300 |
| Sol. sodium hydrate | 6 cc. |

The daily dose is from 4 to 6 tablespoonfuls.

**Trachoma.—**

A one per cent. oily solution of acoine is a useful analgesic when applying copper sulfate to trachomatous granulations. The oil is applied to the palpebral conjunctiva after application of the crystal.

**Sciatica.—**

Inject 10 c.c. of saline solution into the sciatic nerve and repeat on several occasions if necessary. Results have been satisfactory in the majority of cases so treated.

**Hay Fever.—**

Wash out the nasal tract with warm, normal salt solution to cleanse it thoroughly, then by means of a swab, spray, or canula, apply massolin liberally to the involved mucosa, repeating two or three times a day until the symptoms subside.

**Ulcus Serpens.—**

A two per cent. ointment of picric acid in eczematous blepharo-conjunctivitis, lime burns, traumatic keratitis, and ulcus serpens, is excellent. It promotes rapid healing and disappearance of the micro-organism.

**Nose and Throat Anesthetic.—**

Chevanne gives the following as a most useful anesthetic in operations on the nose and throat:

| | |
|---|---|
| Acid carbol. | gr. xxx |
| Menthol | gr. xxx |
| Quinine hydrochlor | gr. xxij |
| Adrenalin | gr. 1-20 |

**Labor Pains.—**

Heroin hydrochloride ⅛ grain with atropine sulphate 1,1000 grain may be given hypodermically in one dose, or, according to the stage of labor, in divided doses, for the pains of labor. It does not interfere with the use of chloroform, nor hinder the action of the voluntary muscles, and is perfectly safe.

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# ELECTRO-THERAPY.

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## Success or Failure in Electro-Therapy.*

### A Consideration of Some of the Causes.

BY SAMUEL SLOAN, M. D. GLASG.,
President of the Electro-Therapeutical Section of the Royal Society of Medicine during 1909-10; Examiner in Midwifery and Diseases of Women to the University of Glasgow.

(From *The Lancet.*)

THIS is the tenth year since the foundation of the British Electro-Therapeutical Society, the parent of the present Electro-Therapeutical Section of the Royal Society of Medicine, and it seems to me a fitting opportunity to review the progress of electro-therapeutics during that time. Electro-therapy now has no need to fear the sneers of the profession. At the present day it is more in danger of being made the spoilt child of medicine, for it is admitted even by those who are not working in this department that no specialty has made more advance in recent years or is pursued on more strictly scientific lines.

I shall not attempt to give a *résumé* of the general progress of electro-therapeutics since the foundation of our society, but shall confine myself to what is strictly personal, and attempt to give briefly a record of some of the experience I have myself gained during these years, in so far as it may be helpful towards securing success in the future.

If I had been asked, after one year's experience of high-frequency treatment, what I really thought of it I should have had to confess that I had some difficulty in answering the question. My work had not been so successful as I had anticipated. I had not even then realized the possibilities of the treatment. By that time I had acquired so much experience of low-tension currents that I was perhaps hard to please. Now I have no hesitation in saying that I would be seriously handicapped in the struggle with disease without the whole of my electric plant at my command. I have had many failures in the past, but I have endeavored to make these failures milestones on the road to success, and I am feeling now such an amount of confidence in the therapeutic effects of electric currents that I start treatment in new cases with an assurance of success which I formerly could not have believed possible.

Wherein, then, is this confidence? This is the subject of my paper. In the first place let me emphasize the importance of a correct diagnosis in each case. This does not mean merely determining the name of the disease; it means obtaining a complete grasp of the patient's condition—why is he ill; what prevents him from getting well; what, if any, cause is still in operation? Indeed, I am realizing more and more that the successful electro-therapeutist must be first of all a skilled physician with a wide experience of men and women in health and in disease; for it is a diagnosis not of

*Read at the meeting of the Electro-Therapeutical Section of the Royal Society of Medicine on April 21st, 1911.

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the disease but of the patient which is all-important. Again, many failures in electro-therapy, I feel sure, are due to neglect in the diagnosis, not of the disease, but of the cause. Take a case of headache, for instance. How difficult it is we all know to cure many of these even electro-therapeutically, largely because the discovery of the cause so often baffles us. Though there are many causes of headaches, these may for all practical purposes be considered as two only—namely, toxic and ocular. Let this be borne in mind and the cure is much simplified. If toxic, is the sepsis oral, tonsillitic, intestinal, uterine, or urinary? No permanent improvement can be effected till this is determined. Not the headache, therefore, must be treated in these cases, but the sepsis, and, except when the dentist is required, this can usually be to no small extent carried out electrically. If, again, on the removal of the sepsis medicinally or electrically the headache should persist, as is not at all unlikely, whether it be due to cerebral congestion or to peripheral neuritis, we have admirable means in our electric armamentaria to combat it. Oculists inform us that if the headache is ocular only the pain will be found absent on waking in the morning, will come on early in the day, and steadily increase till evening. Toxic headaches, on the other hand, are worst in the morning and get better as the day goes on, owing to the elimination of the toxins by exercise and fresh air. Of course, these two causes may be combined and often are, the headache being present in the early morning and remaining all day. Suitable glasses will at once remove the ocular cause and make the management of the case a more simple matter electrically. The same may be said of insomnia; but here we have a less simple origin. The psychic element enters largely into the etiology of this distressing complaint. Therefore the greater is the importance of a minute inquiry as to the whole life of the patient. Is the cause idleness, alcohol, emotional excess, or undue nerve strain? Once remove the cause or causes, however, and, if sound sleep does not follow, we have an assured means for its cure. At least this is my experience of treatment by faradization of the brain, and even by autocondensation.

Again, another cause of failure in electro-therapeutics, besides the failure to detect the cause, is that the electric treatment is begun before the patient is ready for it. He has come for this kind of treatment and will be disappointed if it is not started at once. Some preliminary treatment, however, is usually needed. Or, again, he is too weak or his work is too strenuous, or coming for it would involve an amount of fatigue which might not only prevent it from helping, but even make it capable of doing injury. Anything, indeed, which is capable of benefitting in suitable cases, and when suitably administered, is equally capable of injuring under different conditions. This may almost be taken as an axiom, but I fear that in electro-therapy it is too frequently forgotten.

I have referred to the fact that, even after the removal of all the causes of disease, it by no means follows that all the symptoms will disappear. I had a few months ago an illustration of this. A gentleman called upon me for a certificate that he was no longer fit for his occupation. He was, and had been for many years, an accountant in an insurance office, and was finding it impossible to keep his brain in working order. His idea was that an outdoor occupation, such as inspector of agents, was all he was now fit for. I said I was not prepared to agree with him without some investigation of his case. I found upon examination that he was suffering from oral sepsis, gastric disturbance, and general ill-health, and I advised first the removal of all diseased stumps, then a

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tonic and a fairly long holiday. He felt so much better on his returning in a few weeks that he resumed his old work with the expectation of being able to continue it, but in a very short time his former condition returned and he was quite unabel again for any brain-work. I then began the application of faradisation to the brain and promised to make him in a short time perfectly fit for his usual occupation. After a course of this, during which he remined at his ordinary employment, he declared himself quite well and able to manage his work with his former ease. Coming to me afterwards, he said that having been busy of late with the annual balancing of accounts, and having been working for the two previous weeks daily from 9 a. m. to 10 p. m., he was fearing another breakdown. I resumed the treatment for a few days, and so enabled him to tackle successfully the extra work till it was finished. In alcoholic cases, again, there is sure to be failure if treatment is undertaken without a period of probation and preparation. Total abstinence should be enjoined or only small quantities of a light claret or lager beer allowed, with perhaps a mild course of some saline. With these preliminaries a course of electro-therapy may be begun with reasonable expectation of success. Even in serious organic disease, where cure is impossible, I have known life prolonged and made happier by judicious electric treatment. A case of malignant disease of the colon, for instance, was so much benefited by dorso-abdominal faradisation as to make the friends wonder if, after all, there had not been an error of diagnosis.

I have spoken of peripheral neuritis when referring to headache, and this is frequently the condition when headache is complained of. There is a tenderness on pressure on one or both temples, and possibly posteriorly also. Here general electric treatment is, I find, of only small avail; but the vacuum electrode, rubbed over the tender parts till a distinct redness results and remains as a burning soreness for an hour or two, will frequently relieve and finally remove the painful condition. Failing this, cocaine ionization may act like magic. I usually, when the neuritis is over a well-padded region, such as the back or the shoulder, employ the condenser electrode and finish off with the electric vibrator. I suspect that one reason for failure in cases of so-called rheumatic neuritis of the trunk is that the spinal root of the nerve supplying the part is untreated; for, if careful examination be made of the spine, a tender spot will be felt on the affected side, treatment of which as above will go far towards effecting a cure of the pained part. Massage with the condenser electrode will sometimes remove a chronic sciatica when milder electric measures fail. In very chronic cases the massage must be deep and the applications strong. Excellent results may be obtained by fairly vigorous effluve from the high-frequency solenoid applied over the whole of the spine, strong enough to be just short of sparking and for a period of 15 minutes, for pains in the lower limbs and for a very troublesome condition, nocturnal fidgets, which sometimes render sleep impossible.

Even in organic affections of the spinal cord much good may sometimes be effected by electric applications to the spine. I have known a case of spastic paraplegia with exaggerated knee reflexes and marked ankle clonus arrested, although a year of active medicinal treatment and a prolonged holiday had failed, the case continuing to go from bad to worse. The reflexes are now almost normal and the ankle clonus has practically disappeared, whilst the patient is at least as well now as when the disease was first detected. The only electric treatment in this case was 15 minutes' daily application of the effluve to the whole of the spine. Another case, in a woman where the paraplegia had lasted for nine

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years, has remained well during the past ten years. No one could now suspect that she had ever been paralyzed. In this case the treatment was by faradisation between the upper dorsal region and the feet once or twice a week for five months.

The history of auto-condensation since its introduction has been a varied one. I feel sure, from what I hear and read, that it is losing, if it has not already lost, its reputation; and yet no form of treatment is at present giving me more satisfaction. Why is this? I attribute my increasing success in part to my practice of giving smaller doses than formerly, and to the habit of controlling the environment of the patient on the days of administration of the treatment, as well as to the care with which I select my cases.

A common reason for failure in cases which are otherwise doing well is that patients do not allow sufficient time for repose, or at least cessation from strenuous work, before and after each application. The business of having the applications is hurried through. They come for the treatment fatigued perhaps, and they arrange for some important duties as soon as they leave—a dressmaker to see, some shopping to do, or a call to be made. This is fatal. An hour or two of quiet rest, not necessarily of idleness, before each application and the same after it will make an immense difference in the result, unless when merely local conditions are being treated, and often even in such circumstances if the best results are to be obtained. In cases of severe neurasthenia indeed I insist upon absolute rest for an hour or two before and after each application, permitting perfect freedom of action during the rest of the day.

Regarding the question of regulation of dose I usually begin with one of 200 milliampères only. In one or two cases I have started the treatment with a milliampèrage of 100 only, especially where the blood pressure was low and the patient liable to fainting turns. At each after-visit the effect of the previous sitting is ascertained. If exhaustion has followed it a smaller dose is given. If a sense of increased vitality or a comfortable weariness only is reported the original dose is given or a slightly increased one. If upon inquiry the patient reports a busy forenoon, or an expected active time after leaving, less current is administered than was formerly given.

When the treament is applied daily therefore the time devoted to it is considerable, though the actual application is only of 15 minutes' duration. Where three applications a week are given I permit absolute freedom of action on the alternate days with reasonable avoidance of fatigue. All this may seem trifling and not worth mentioning, but it must not be forgotten that great results are only obtained by attention to trifles; and I have had such good results from auto-condensation when all else, including a prolonged holiday, has failed, that I am inclined to continue my practice. Let me here say that any holiday which can be obtained will be much more pleasant and more profitable after such treatment than before it.

Before leaving the subject of high frequency I should like to draw attention to the beneficial action of local applications, as distinguished from auto-condensation, in gastro-intestinal trouble. For example, the effluve over the abdomen for five or ten minutes before the application of auto-condensation will aid materially. So also will the same applied over the spine behind the arch of the aorta assist in cases of cardiac dilatation. In cases of eczema, when the health has improved and general irritability has been relieved by the auto-condensation, the local condition may remain practically uninfluenced till the vacuum electrode has been applied to the parts in sufficient strength to cause a sense of surface burning, when pru-

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ritus will cease and the previous rough red surface will disappear, but usually I find on the parts treated only. I wonder if any of you have observed how nervous a patient may become after about ten minutes of auto-condensation if placed on the couch shortly after a full meal. The best results, I find, are to be obtained shortly before a meal. I suspect that treatment is often withheld because the patient, usually a woman, is terrified of it. I never allow this to influence me where everything else has failed. The dread disappears, the patient's countenance changes, and a previously hopeless invalid is delighted to find herself well again.

I have absolutely failed in the treatment of diabetes and of confirmed obesity with high-frequency currents — failed, that is, in influencing the specific condition. At the same time, if obese people or diabetics are otherwise ill much benefit may be derived from auto-condensation properly applied. In simple glycosuria, on the other hand, the glucose can be made to disappear early in the treatment of the case, especially where it has been observed to come and go according to the condition of health of the patient. Again, in cases of generalized chronic rheumatic arthritis where there is obviously evidence of profound constitutional disturbance of long standing the results have been unsatisfactory. This is what might be expected. In these cases I have tried both high-frequency and ionic medication. If the case is made worse early in the treatment I am more hopeful, though it is difficult to get the patient to see it in that light. A possible reason for non-success may be that the length of the treatment should probably be proportioned to the duration of the disease, and this may prove too irksome to the patient. On the other hand, even a relatively short course of treatment may in time prove beneficial, but as the patient may in the meantime have been lost sight of it may be difficult to obtain knowledge of the final result. A case illustrating this came under my care some years ago. The lady had suffered for 20 years from progressive rheumatoid arthritis, her hands being practically useless. The report at the end of 12 applications of high frequency, local and general, was: "More freedom of movements of arms, but condition of hands and knees unchanged." Three months later the report sent to me was: "Ever so much better, stronger, less pain in joints, and less stiffness." About a year after she called to express her gratitude for the great improvement she then felt. Possibly, therefore, the failure in these cases is less real than at first might appear.

I have heard it said more than once that there are some patients whom electrical treatment in any form disagrees with. I am not prepared to accept such a statement without further details. In such cases I would be inclined to say, Why? when a possible explanation might be forthcoming. This reminds me of the case of a medical friend in the country. He had known of my success in cases of insomnia when treated by faradisation of the head, and so he had it tried in his own case. The result was such as to make him vow that he would not attempt it a second time. Continuing, however, to suffer, and being so restless from nervous exhaustion that he could not remain at rest in bed, he sent for me in the hope that there might be something in what I had said after all. I took with me an excellent large sliding coil which I had had from Mr. Dean of London, and the current was no sooner applied to the head than the restless movements ceased, and he exclaimed, "Oh! how delightfully soothing.' Evidently the first application had been from a small coil, giving therefore a coarse current; for it is not simply the quantity of faradic current, but its quality which tells in such cases. Two milliampères

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can be borne with comfort from such a coil as Dean's, whereas less than one milliampère from an ordinary coil might irritate instead of soothe.

In cases of severe gastric dilatation my experience is that where there is no pyloric obstruction, congenital or acquired, success from electro-therapy may be looked for. Several cases treated by me had a successful result. I shall briefly relate one which came under my care in 1904. The lad had been off work for a year and the stomach had been washed out twice daily for weeks, but this lavage had to be given up on account of pain. Vomiting of sour and frothy material had occurred almost every day. His general condition was such that I decided to try electric treatment for one month only, when if no real improvement resulted he must have gastro-enterostomy performed. I gave him oro-epigastric applications of bi-polar treatment from the high-frequency solenoid, with a spark-gap of 1 mm. in series, which caused rhythmic muscular twitchings extending from the neck to the epigastrium. In a few weeks there was marked improvement. One year later the report given to me was: "Has been working for some months, can eat anything, is stout, and only knows he has a stomach if he gets cold." This is the only form of current which has been successful in my hands in gastric dilatation. One drawback to it is that there is some uncertainty as to the regularity and strength of the muscular movements. Possibly the static-induced current might be as efficient. It could be absolutely relied upon at any rate for regularity and force.

I am sorry to have to report numerous failures in cases of melancholia. Where, however, this is slight and has a definite cause in the patient's mind, especially if it is due to worry and brain fatigue and is accompanied with sleeplessness and general ill-health, and where the asthenia is cerebral more than psychic, success is almost certain. If, on the other hand, the melancholia is irrational, and especially if it is associated with delusions, failure is in my experience just as certain. The removal in such cases of the insomnia seems to have little, if any, influence on the melancholia; and is notably so where the mental affection has resulted from the loss of a dearly loved husband or wife. In one such instance my advice to the widower to take a new partner in life resulted in a complete cure.

In cases of occupation neuritis I find it safer, if the occupation cannot be temporarily suspended, to give a guarded opinion as to the results of electro-therapy. This is only what might be expected since the cause remains in continued operation. Here I would warn against encouragement at the beginning of treatment of the expectations of nervous optimistic patients, where there may be even justifiable reasons for expecting success. Some necessary patience must be inculcated in these cases, and not too much promised at the start, otherwise possible success may become actual failure through early disappointment.

I have so recently given my experience of electro-therapy as applied to gynæcology that I shall be brief in my reference to this department. I should like to give a warning, however, regarding intra-uterine ionic, or ordinary pelvic galvanic, treatment in cases of disease of one or both ovaries. If the treatment is employed in such cases pain on the part of the patient should be considered as an indication either that too large a current is being employed or that the treatment is in that case unsuitable. I have had cause to regret applying it in such circumstances. In one case I had reason to suspect that intra-uterine high-frequency treatment was the cause of an acute attack of pelvic cellulitis. Since the mere passing of a uterine sound has been known to have such a result, the electric current may not have been ac-

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countable in this case; it is difficult indeed to see how it could have been so. I mention the case, however, as a warning.

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### X-RAY IN PYELOGRAPHY.

Walker, in the *Lancet,* states that radiography affords more definite information. An experienced radiographer can show the outline of the kidney even in stout subjects, and occasionally the shadow of a diluted ureter can be seen in an exceptionally good plate. Such accuracy can only be obtained by careful preparation of the patient. A vegetable laxative should be given two nights in succession before the examination. It is a mistake, however, to purge the patient. The important point is to have the bowel as empty as possible, and to this end the patient should eat very little on the day previous and nothing on the day of the examination. The judgment as to whether a shadow of the kidney is moderately increased in extent is by no means easy.

It is, as all are aware, an easy matter by changing the relative positions of the patient and tube, to change the position of the shadow of the kidney or of a calculus. The shadow may within certain limits be projected outwards or downwards, and it may thus appear that the kidney is larger than normal or occupies an abnormal position. It is therefore necessary in any examination in which the side or position of the kidney is to be examined, and perhaps re-examined, that a fixed relative position of patient and tube should be used and that the source of light should be exactly in the middle line of the body, and, further, the radiographer should be able to reproduce with mathematical exactness this position on future examinations. It is under such conditions that Dr. Ironside Bruce has taken the radiograms which illustrate this lecture.

The author distrusts any statements in regard to minor displacements and enlargements of the kidney where no such fixed relative position has been used. The outer border of the kidney shadow and its lower pole are the limits which are most clearly seen.

Is it possible in a given case to say whether there is slight enlargement of the kidney shadow? There is, of course, no standard size of kidney which will fit all patients. The normal kidney varies in size in men and women, and to a less degree in different individuals. But apart from that, the varying size of the body makes it impossible to give the kidney the same relation to the plate in each. The relation of the kidney shadow to the twelfth rib gives no help, for this rib varies very greatly in length and in the angle it forms with the vertebræ, not only in different individuals, but sometimes on each side of the same individual.

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### ELECTROCARDIOGRAPHY IN MEDICINE.

Lewis, in the proceedings of the Royal Society of Medicine, discusses the relationship of electrocardiographic methods to medicine. Its principal work has been to clear up the mystery surrounding delirium cordis and paroxysmal tachycardia. The delirium cordis is definitely due to the experimentalists' fibrillation of the auricles, and this is accountable for 50 per cent of all irregularities; it is of further importance because it reacts to drugs in a specific manner. Cases of paroxysmal tachcardia may be placed in several classes. The first show crises of auricular fibrillation. In the second the paroxysms depend upon new impulse formation in the myocardium at a point remote from the normal impulse formation area; the attack depends upon the substitution of a new rhythm for the old. With this discovery has come the localization of the pacemaker in the right auricle just at the entrance of the superior vena cava. While the instrument lacks the portability of the poly-

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graph, it can be carried remotely by wires, and it gives quickly an infallible analysis of the sequels of contraction in the cardiac chambers (not of the effects of contraction on the veins, as does the polygraph) without any measurement. Finally it gives information of the direction pursued by the contraction waves. It must be given a place with percussion and auscultation. Its information is direct and definite whether given or withheld.

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### A SEVEN-CENT BATTERY.

The *Scientific American* describes an electric battery costing but seven cents, made as follows: Procure a large glass or earthenware jar holding at least one-half gallon. If the top is not level or tapers, a glass jar can be cut level by the following means: Pour water in

spark- caused rhythm.. tending from the ne- In a few weeks there was provement. One year later the given to me was: "Has been worki for some months, can eat anything, is stout, and only knows he has a stomach if he gets cold." This is the only form of current which has been successful in my hands in gastric dilatation. One drawback to it is that there is some uncertainty as to the regularity and strength of the muscular movements. Possibly the static-induced current might be as efficient. It could be absolutely relied upon at any rate for regularity and force.

I am sorry to have to report numerous failures in cases of melancholia. Where, however, this is slight and has a definite cause in the patient's mind, especially if it is due to worry and brain fatigue and is accompanied with sleeplessness and general ill-health, and where the asthenia is cerebral more than psychic, success is

admit the carbon. The flannel is fastened, as shown, to the wood, forming a bag around the carbon in which the coke is packed tightly. The zinc and carbon can be held by any suitable means in the jar, and wires may be attached to the ends. The jar is filled about two-thirds full with a solution of 3 ounces of salamoniac to ½ gallon of water. The battery will be found very efficient owing to the porous carbon elecent.

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### A COURSE IN ELECTRO-THERAPY.

Any of our readers who is desirous of taking a practical course in electro- therapy would do well to communicate with this office before making their arrangements. We can put such a person in the way of procuring tuition in the best college of electro-therapeutics in the country at an advantageous reduced rate. Write for particulars to the MEDICAL BRIEF, 9th and Olive Sts., St. Louis, Mo.

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The adhesive plaster being unwrapped. the porous paper cylinder will be found to contain a crayon of carbonic acid gyn- mbling very much the crayons used referen- ing on a blackboard. The blot- like to giv- may be unwrapped from one ing intra-uter- ayon so as to expose the galvanic, treatm- waiting a short time the of one or both ov- ind to have lost some is employed in su- direct evaporation part of the patient s, as an indication eithe- blotting paper tube. current is being empl- de to protrude as treatment is in that ca- ding the tube have had cause to regret ng to prevent such circumstances. In on- together. The reason to suspect that intra- enough and a frequency treatment was t- heat to serve an acute attack of pelvic cell- n, which must the mere passing of a uteri- hand. been known to have such electric current may not h-

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# BOOK REVIEWS.

AN INTRODUCTION TO THERAPEUTIC INOCULATION. By D. W. Carmalt Jones, M. A., M. D. (Oxon), M. R. C. P. (Lond.), Assistant Physician and Director of the Department of Bacterio-Therapeutics, Westminster Hospital, London, England. London: MacMillan and Company, Limited, 1911.

This book is divided into two parts, under the heading of Principles and Practice. The first part is an attempt to state in the simplest possible terms the common sense of therapeutic inoculation, the object of which is to induce immunity to bacterial infections. The main principles of immunity are quite simple, and only such experiments as are illustrative of these principles have been cited in this book. The second part of the book deals with the practical application of these principles and some technical details which are described in the first part are, for the sake of clearness, repeated in the second for the sake of completeness and to avoid cross-reference. This part of the book deals with the treatment of certain infections by means of therapeutic inoculation. Only those infections of which there has been large experience are considered, and exceptional cases are rarely mentioned. The technique described is substantially that employed in the laboratory at St. Mary's Hospital, London, which is admittedly the headquarters of this type of therapy. The book commands our unqualified endorsement, and we heartily recommend it to all those practitioners who are practically interested in this important branch of modern therapeutics.

HUGHES' PRACTICE OF MEDICINE. Including a Section on Mental Diseases and one on Diseases of the Skin. Tenth Edition revised and enlarged. By R. J. E. Scott, M. A., B. C. L., M. D., attending physician of the Demilt Dispensary; formerly attending physician to the Bellevue Dispensary, New York. With 63 illustrations. Philadelphia: P. Blakiston's Sons and Company, 1911.

This time-honored book appears to lose nothing of its popularity, or, for that matter, of the elements which have gone to make it popular. It remains, so far as we can see, a standard of this type of work. The inclusion of the sections on psychiatry and dermatology make it more complete than most books of its class and its entire arrangement is a model of conciseness and comprehensiveness. Many changes appear in this tenth edition indicative of the march of science since the appearance of the previous issue. Pneumonia has taken its place, very properly, among the infectious diseases instead of among diseases of the lungs, and Herpes Zoster among diseases of the nervous system instead of among skin diseases. Several new sections have been added, such as Pellagra, Glandular Fever, Cammidge's Reaction, made necessary by investigations in these subjects. Special attention is paid throughout to diagnosis and treatment, as being the cardinal points in a practical work. Numerous tables of differential diagnosis have been added and the number of illustrations increased from twenty-seven to sixty-three. Both those who have those who have not are advised to secure a copy of the tenth edition.

VACCINE THERAPY IN GENERAL PRACTICE. By George H. Sherman, M. D. Published by the author. Detroit, Mich., 1911.

There is no doubt whatever that the majority of the medical profession are "passing up" a good thing in therapeutics when they fail to use the vaccines as a routine of treatment. For this they are not themselves altogether to blame. There are many important features of

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bacterial therapy which have been brought to light by recent investigators and mentioned in literature, which, however, so far as the great rank and file of the profession is concerned, are buried forever. In this book a number of them have been gathered together and, savored with the personal experience of the author, will serve as a perpetual contribution to the practical end of this growing branch of therapeutics. The distribution of Dr. Sherman's little book will do much to stimulate an interest in this field; and while it may be frankly admitted that it is partly intended to increase the author's business as a maker of vaccines, it will only do so by correspondingly increasing the business and the success of those who avail themselves of it.

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HEALTH HINTS AND HEALTH TALKS. By E. R. Pritchard, Secretary of the Chicago Department of Health. Chicago: The Reilly and Britton Co., 1911.

These Hints and Talks were originally published in newspaper form, as a part of the educational and publicity work of the Chicago Department of Health, and it is universally conceded that they accomplished a great deal of good in helping people to more light on the all-important matter of health and sanitation. The author and publishers now offer them to a wider circle of readers in the hope that they will be of still further aid in spreading the gospel of health and the abolition of needless sickness and death. From our own rather cursory examination of the book we should be disposed to think it will be much better adapted to the physician than to the public; but, at all events, it will serve the purpose of a first rate instructor for the practitioner in his public and family relationships. It will teach him how to teach his clientele.

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GONORRHEA IN THE MALE. A Practical Guide to Its Treatment. By A. L. Wolbarst, M. D., Consulting Genito-Urinary Surgeon, Central Islip State Hospital; Visiting Genito-Urinary Surgeon, People's Hospital, West Side German Hospital and Beth Israel Hospital Dispensary; Professor of Genito-Urinary Disease, New York School of Clinical Medicine, Etc. New York: International Journal of Surgery Co., 1911.

At first blush one might be inclined to think that the subject of the treatment of gonorrhea has been treated so exhaustively and so frequently that a book of this character would appear to be superfluous, to say the least. But those who are in a position to know will testify with practical unanimity that, in spite of the wide discussion of the subject and the commoness of the disease, the general practitioner is still very much at sea as the modern scientific treatment of gonorrhea. Hence we are forced to the conclusion that there is a real need of such a manual as this which Dr. Wolbarst has furnished. It is certainly worthy of perusal and adoption. We especially commend its practicality and its conservatism. The author believes, and we heartily agree with him, that considerable damage is being done by the prevalent methods of treating gonorrhea, particularly in respect of our remedies being too strong and used with a vigor that is far too heroic for the delicate and inflamed tissues to bear with impunity, and his work is a plea for greater gentleness and conservatism in the drugs employed and the instruments used. It differs from most works on the subject in that it gives clear and precise directions for the carrying out of every method of treatment that it recommends.

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**Jaundice.—**

When the symptoms of gastro-intesinal irritation have subsided, Wilcox recommends the administration of a bitter tonic, such as the following:

Acid Nitrohydrochlor. dil.....dr. vj.
Nuc. Vom. fl. ex.
Gentianae fl. e. aa.....dr.j.
Aquae Cinnamon. q.s.....oz. iv.

A teaspoonful in water before each meal.

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# THE DOCTOR'S EASY CHAIR

### A LEGEND OF DANTZIG.

THE SHORT winter afternoon was drawing fast to a close; the sun, on the very point of setting, shot its last red rays slantwise across the roofs of Dantzig, lighting up its old crooked streets and quaint gabled houses with a ruddy glare; an old man, accompanied by a little girl, dragged his way wearily into the outskirts of the town. The pair had evidently come a long distance, for their shoes bore traces of recent hard usage and their faces were literally pale with fatigue. They were ill-fitted for such travel; for one was of so tender an age that she ought at that moment to have been in the shelter of a mother's arms, and the other was of such feeble years that he should have been receiving the ministrations of comfort due to labor done and strength declining.

It was easy, too, to see that the old man was blind; for with one hand he held fast to his little comrade, and with the other felt his way cautiously by means of a stout cane.

A hundred times during the last eight days the child had looked wistfully into the old man's sightless face, and asked:

"Are we almost there, grandpa?"

And each time he would answer, soothingly and patiently:

"Yes, Lotte. Yes, poor child. Almost there. Surely it can be but a few miles further!"

Now, as they reached the outskirts of the town, Lotte noticed that the old man began to walk more confidently, as though he knew the ground, and was sure of his way, and she wondered what could be the reason. At each step nearer the town his confidence increased, and he became strangely excited, as though the nearness of the place wrought upon him with a subtle and powerful spell. He began to mutter to himself, and finally broke out into a mumbled speech.

As the travelers walked, hand in hand, down the narrow, crooked streets, in which the chill, gray twilight was now fast gathering, a door opened here and there, letting out a flood of warmth and light across their path, which made the child's poor pinched face more wistful and her lonely little heart more homesick by contrast. But her grandfather hurried her on; it was he who was leading, almost dragging, her now. He seemed not only to have no eyes, but no thought for anything but his quest, whatever that might be; for poor Lotte knew nothing of the purpose of his strange journey, and the poor little soul was, indeed, in no fit condition to care for anything but food, and rest and warmth.

"Are we not going to stop for the night, grandpa/" she asked at length, lagging heavily.

The old man pulled up quickly.

"Poor little one!" he said, in his pitying way. "Poor tired Lotte! We are both very tired, are we not? But we shall stay here a long time, little one—a long, long time. Find a place for us to stay, Lotte. Choose a house where the faces look good, and ask for lodging and food."

So the next time a door opened, shedding light and warmth across their way, Lotte anxiously scanned the faces of the inmates with a view of making advances for food and shelter for the night. Encouraged by the result of her scrutiny, she timidly rapped on the door, and was greeted by the hearty voice of the woman of the

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house, a plain simple body, whose motherly heart was touched in a moment by poor Lotte's wistful face and pathetic little figure, as the child wearily tried to explain the situation.

"Well, well," she exclaimed. "The poor child! Come in, little one. Thou art tired and hungry. Come in. And the old man, too. Well, well, thou too art cold and weary. Come in, you two, and you shall rest and eat. We are but my husband and I. There is fire enough for all, and food yet."

She hustled them into the house, closing the door on the cold and the night; and, before they were more than physically aware of the grateful change, they were esconced in chairs before the fire, and supplied with a bowl of steaming broth. Gradually, as the warmth of the fire stole into their tired limbs, and the nourishment of the food comforted their hungry bodies, the old man and the little child (alike in so many respects), yielded to the delicious narcotics, and fell asleep in their chairs, without ever properly realizing how or whence the soothing influences reached them. Tenderly the motherly woman undressed the sleeping child (thinking, no doubt, as she did it of the child she had been wont to put to bed, who was now "grown up" and needed her no more), and laid the little tired-out body on a bed that she made of soft comforters and blankets. With equal tenderness she removed the old man's worn shoes and, with her husband's help, got him on the lounge before the fire. And, for a time at least, the old man forgot his strange excitement, and Lotte her childish cares.

They stayed there the next day and night. The day was very stormy; the wind blew high, and the snow fell thick and fast; and both were compelled to keep to the house. This Lotte was nothing loth to do, but the old man, refreshed by his good night's rest, chafed at the restriction, and fumed ungratefully at his comfortable imprisonment, until sleep put him again beyond the reach of circumstances.

The second day, however, was bright and frosty, and, after a good warm breakfast, at the old man's impatient bidding, Lotte put on her hat and cloak and led him out. All his excitement and strange spell had returned to him tenfold, and, once outside the house, he did not seem to need any guidance from the child, but himself did the leading. He led her by the most direct route to the walls of the old cathedral.

Dantzig boasts of one of the finest, as well as one of the oldest, and certainly one of the most celebrated, cathedrals in Germany. It is celebrated for many things; for the beauty of its architecture; for the delicate tracery of its mouldings; for the graceful contour of its massive walls. But, more than all, it was celebrated for its clock—the famous work of a famous artist.

It was, indeed, a wonderful clock, and worthy of the reputation it enjoyed. There was not another like it in all Europe, for the secret of its construction had disappeared with its inventor. Its fame had spread through the whole continent, and many artists and men of science came at intervals to examine its mechanism and to admire its complex perfection.

Under the tower containing this marvelous piece of machinery the old man lingered with strange persistency all that bright winter day, hardly allowing himself to be led home at noon for dinner—of which meal he ate nothing, but waited with feverish impatience for Lotte to be finished, so that she might accompany him again to the old cathedral tower. A dozen times that afternoon he pointed out to Lotte, as they paced up and down the almost deserted street, the wonderful clock at the top of the tower.

"Is it not a wonderful clock, Lotte? Tell me, child, is it not beautiful? Can you see it, Lotte?" So he ran on.

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At length she persuaded him to return home for his supper, and he did not go out again during the greater part of the evening. But when it grew almost bedtime, he told his hostess that he had important business in the town which might keep him several hours, and bade Lotte put on her hat and cloak, and go with him. He led her again to the old cathedral tower, but this time he did not content himself with walking up and down on the street, but went confidently up to the wall, as if seeking for an entrance.

The old man groped his way with remarkable ease along the old gray wall, feeling every inch as though he knew it by heart, and dragging the now quite passive Lotte by the hand in his eager and excited haste.

"Here there should be a door—a small door," he muttered. "Ah, it is here. Open it, Lotte, it is not locked. Inside there should be a staircase, and at the foot of the stairs another door. That is where the Sacristan lives. Knock, child, for we shall need his help.

"Grandpa, grandpa," pleaded the child, pitiously, "what are you doing? Let us go home. It is late and dark."

"Tut, tut, child," he answered, "darkness and light are all the same to me. Keep hold of my hand and fear nothing. Nothing will harm you, little one. Knock at the door."

"Must I, grandpa?"

"Yes, yes, knock. Or stay," feeling the panels with his trembling hands, "I will knock myself."

He rapped with his cane upon the wooden door, the knock sounding strangely loud in the echoing staircase, and little Lotte's heart quaked. Presently the door swung slowly open, and the figure of the old Sacristan appeared in the doorway, half-dressed, holding a lamp over his head.

"Who's there?" he demanded, in none too gentle a tone.

"A stranger," answered the old man, "who desires to see the famous clock of Dantzig."

"You are too late," said the Sacristan, crossly. "Come again in the morning."

"The morning will not do," replied the old man. "I want to see it tonight."

"Then you must see it from the outside."

"No, no, that will not do. It is not the outside I would see. I am a mechanic, and I would fain look upon the mechanism of the wonderful clock."

The Sacristan would have shut the door in their faces, but at that moment the old man drew from his pocket a handful of gold pieces, which gleamed temptingly in the scant light of the lamp. Lotte wondered where her grandfather could have got so many riches, but she said nothing, only waited and watched in fear and trembling. At the sight of the pieces the Sacristan's manner changed, and when the old man thrust one of them eagerly into his hand, he said:

"Well, if I take you up, you must promise not to betray me, for if it should be known that I did so at such an hour I should lose my position."

"I will promise," said the old man. "And you shall have a gold piece for every minute that I am permitted to gaze upon the works of the clock."

The Sacristan disappeared for a moment, and reappeared, fully dressed and carrying a somewhat larger lamp. He carefully closed the door of his room, and the door by which Lotte and her grandfather had entered, and led the way cautiously up the dark, winding staircase. The old man followed as fast as his aged limbs would allow, and Lotte came last, holding fast to her grandfather's hand, and

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her hands and feet hardly colder than her heart. Up they climbed in silence, past the ghostly belfry with its gaunt silent tenants, until at length they reached the chamber where the works of the clock were encased. Here the Sacristan stopped, and set down his lamp upon the corner of the iron beam that surrounded the clock.

The old man stood and gazed with his sightless eyes at the complex machinery of the great timepiece, and listened to its sonorous and regular ticking, as the enormous pendulum swung back and forth, until it had beat out several minutes. The Sacristan counted them gloatingly, for each minute meant a gold piece for him.

The bitter cold; the strange wierdness of the dimly-lighted chamber; the ghostly shapes of the machinery that loomed up like limbs of a living creature; the rhythmic beating of the pendulum, and the otherwise intense stillness; all wrought upon little Lotte's already highstrung nerves, until the poor child's teeth chattered with cold and fear.

"Dear grandpa," she cried, at length, "Come home! Please come home! I am so cold and frightened. You have seen the clock—now let us go!"

"Peace, child," he said, without turning his eyes from the machinery. "This," he continued to the Sacristan, "is a marvelous piece of work—a wonderful clock."

"It is, indeed," answered the Sacristan, thinking of his gold pieces. "There is not another like it in Europe."

"And yet," mused the old man, "the man who made this could have made another like it."

"Yes," answered the Sacristan, "if he had lived. But shortly after he had made this clock he disappeared, and never came back."

"What was his name?" asked the old man, excitedly.

"Duringer. He lived in this town until, as I have said, he disappeared, and no one knew what became of him."

"Listen, and I will tell you."

The Sacristan, who had taken the lamp in his hand and was showing, by its light, first one part of the machinery and then another, stopped abruptly, and looked at the old man; and even Lotte forgot for the moment her fear and cold in utter bewilderment. The old man never took his eyes from the clock, but went on:

"Duringer was no ordinary mechanic. He was an artist, and this clock was the consummation of his skill. Into it he put many years of his best thought and work, and he loved it as one might love a child. When it was finished, some of the men of Dantzig, fearing that the artist might make a similar, or even a better, one for the rival town of Königsberg, wickedly determined to get rid of Duringer. At first they intended to put him to death; but afterwards they conceived a yet more hideous scheme.

"In the dead of night they sought out the artist where he lived with his widowed daughter and her infant child, roused him and them from their peaceful sleep, dragged them from their home, blindfolded and gagged them, and thrust them into a closed coach. For two long days and nights they drove with them, the artist knew not whither, until at length they reached a lonely, and to them unknown spot, where one solitary and half-furnished house was all the shelter within many miles. Here they released the captives, and, in the sight of the gentle woman and innocent child, they seized the helpless artist screaming and struggling, and with a hot iron seared both his eyes."

The old man turned his eyes for a moment toward the affrighted Sacristan, who then, for the first time, saw that they were sightless. Lotte had fallen on her knees, her hand raised as if in prayer, her fear forgotten in her anguish.

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"Grandpa, dear grandpa," she pleaded, earnestly, "You are cold and sick. Come home with me—dearest grandpa, come with me!"

"Having accomplished their cruel purpose," continued the old man, "they left the helpless trevelers in their lonely hovel, confident that the artist would never be able to find his way again to Dantzig. For many years they lived in their wretched home, the artist lovingly tended and ministered to by his daughter, whose gentle heart, rent by witnessing his sufferings, at last broke, and she died."

"Then a desire took possession of the artist's soul, which would not rest—a desire which strengthened into a purpose—a purpose to revisit Dantzig and be revenged on its cruel citizens."

The tears were by this time streaming down Lotte's face, and the Sacristan's eyes were chained to the face of the old man as by an irresistible spell.

"That purpose, difficult, almost impossible, though it was, Duringer put into effect, and accomplished. After many days of painful, and well nigh hopeless, travel, accompanied only by this little girl, he at last found his way back to Dantzig. I am Duringer!"

He turned his sightless eyes full on the affrighted Sacristan, who, in his fear, let fall the lamp which he held, and the place was in total darkness.

No one spoke; only the loud and regular ticking of the gigantic pendulum kept steadily on. Under cover of the darkness, the old man drew from his pocket a small pair of scissors which he had secreted there. Feeling rapidly and unerringly along the rods of the machinery, he snipped, with the scissors, a single tiny wire, and there was an instantaneous and profound silence; the mighty heart of the great clock had ceased to beat. The brain and hand that had given the gigantic creature life had in an instant stilled it forever.

In the silence that followed the cutting of the wire the old man allowed himself to be led, quietly and passively, down the staircase, which, dark though it was, he instinctively knew as of old, back to the home of his kindly hostess, who put him tenderly to bed. But he never got up again, for the very next night he died. The same stroke that had severed the wire which controlled the working of the gigantic clock seemed to have severed the thread of his own life. The shock that had stilled the beating of the clock's mighty heart had broken the heart of its inventor; and no one was ever able to mend either the one or the other.

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## SIMPLE APPARATUS FOR ADMINISTERING "606."

J. Stewart Hagen, in the *Eclectic Medical Journal,* describes an apparatus as shown in the illustration, devised to simplify and produce an apparatus for the intravenous administration of "606" that is not expensive, and can with ordinary care be used by any physician.

An ordinary 250 c.c. burette held vertically by a metal protector, rubber tubing provided with a stopcock and armed with a suitable needle. About an inch from the needle is inserted a small piece of glass tubing. This completes the apparatus needed for the introduction of the solution.

The mixing of the solution is very simple. The contents of the glass container is dissolved in normal saline solution in a small mortar; a small quantity of a 15 per cent solution of sodium hydrate is added until a precipitate is thrown down, then more of the same solution is added until the solution is perfectly clear. This usually requires about twenty-three drops. This is then added to a quantity of normal saline solution sufficient to make 300 c.c. Distilled water must be used or your solution will be cloudy.

The site of introduction is the median basilic vein. This vein can be made very prominent by the use of a tourniquet above the point of insertion. After all the air has been removed from the tubing the needle is inserted, to satisfy yourself that the vein has been entered; the burette is lowered to a plane beneath the point of insertion, and the blood can be seen to enter the glass tube; the burette is raised to a plane of about two feet above the needle; remove the tourniquet, and the solution will enter. This requires about seven minutes. Should you find that there is some extravasation of the solution about the vein, it will be necessary to make a new puncture.

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# The Medical Brief

A MONTHLY JOURNAL OF PRACTICAL MEDICINE.

Vol. XXXIX St. Louis, Mo., October, 1911. No. 10.

## EDITORIALS.

### MEDICAL SCIENCE AND THE LAY PRESS.

THE PRESIDENT of the American Medical Association, in his inaugural address in 1908, gave utterance to a timely and profound truth. "No permanent advance will ever be made in medical science," he said, "unless the people are made co-partners in the truth." Wise words, worthy of, and pertinent to, the present situation in medical science. The admission of the public into the truths of medical science is not simply a courtesy which medicine owes to the people; not only a matter of expediency for medical science itself; it is a constitutional right of the public. Medicine is itself but a special branch of the world's work, and as a stream cannot rise higher than its source, so the efficiency and intelligence of this division of work cannot be any greater or less than the public relation toward it determines. The medical profession is but a representative body of men delegated by the public to do this special work, which is ultimately a public function; a committee, so to speak, appointed by the public on this special subject, and required to report to the general assembly.

No medical man, we think, will question that the exploitation now being given by the lay press in general is utterly unsatisfactory. Yet it is equally uncertain that the lay press is the only agency by which the public partnership in medical truth can be adequately achieved. Certainly we cannot expect to reach the public through medical journals, even the most radical of them. And, for obvious reasons, it is neither wise nor effective to try to reach the people through pamphlets or lectures, except for very specific and limited purposes, such as hygienic instruction and the like.

This is as far as the matter has ever seemed to get. The next step is one which the medical profession, because of its centuries of tradition, has always found it hard to take, and upon which, in the nature of things, the lay press cannot compromise. It must be conceded that the public press shall carry out the publicity policy in its own appointed way, and that this way is the right way. This is the crux of the whole situation. It is not for the profession to complacently and paternally decide in what subjects the public shall or shall not be educated. What the public needs, and rightfully demands, is that the salient facts and truths of medical science shall, from time to time, as they transpire, be freely and frankly laid before it. The public neither demands nor cares for the technicalities of medicine; that is the aspect of medicine to which it has delegated the profession as its agent. But technicalities pertain to forms and methods, not to truths, and there is no essential fact or truth of medical science which cannot be put before the public in terms of the rest of its

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knowledge. The public will decide, far more unerringly and adequately than the medical profession, the relative usefulness and importance of the various facts and truths to itself and its welfare.

With all its faults, the daily press is the only form of journalism which understands and carries out this principle; and to this principle and method it owes its tremendous power over the minds and conduct of the people. If it is the sense of the profession that the public should be made co-partners in its truths, and if it be allowed that the lay press is the only adequate agency of communication, then the profession can no longer expect to exercise a paternalistic and didactic censorship of the medical news to be disseminated, but only an editorial censorship. It has been suggested that as all great dailies have their sporting and financial editors, they should also have a medical editor, to exercise his discrimination in medical topics. It must be remembered, however, that the press is given full and free access to all that the sporting and financial worlds and their exponents have to offer. Its representatives have their place in every function of the sporting and financial spheres; sporting men and financiers permit themselves to be frankly interviewed, and withhold nothing except in behalf of special interests—and medicine's boast is that she has no special interests.

It is here, we think, that the medical profession has been at fault in its attitude toward the public press and behind the times in its conception of its public relations. According to its ethics, and the policies of the profession, the lay press has found every door to reliable information on medical subjects tightly barred, and can hardly be blamed if, in its zeal for news, it has exaggerated and distorted such items as have occasionally spilled over into its ken. It is high time that these stupidly childish barriers, which have so long maintained between profession and public, be swept away. The physician should be permitted the avenues of approach to and influence over the public, including the daily press, which are open to any other man; and the public, through the lay press, should be given the same freedom of access to the truths and happenings of medicine as it enjoys in respect of all its other departments of knowledge and industry.

One cannot too strongly condemn the idea, prevalent among medical men, that the public is incapable of grasping and evaluating the truths of medical science. The so-called confidences and communications made by organized medicine to the public are ludicrously stilted and arbitrary, like the didactic explanations vouchsafed by a school teacher to his children, and the real informing essence of the matter withheld under the impression that the public cannot understand it. And thus the whole spirit of the purpose is missed; for it is not enough that the public shall be complacently and patronizingly "educated" in matters pertaining to medical science; the public must be made co-partners in its truths.

There is but one adequate agency of public dissemination: the agency which, in spite of all its faults and abuses, is after all the one great commonizer of human knowledge, the clearing house of human progress: the public press. Sooner or later, medical science must lay aside its priestly exclusiveness and avail itself of the medium of the lay press. Such a course constitutes the surest pledge of medical progress, and the only effective, wholesome corrective of dogmatism and self-sufficiency.

[We may add to the above that the *Chicago Tribune*, under the sectional editorship of Dr. W. A. Evans, formerly Health Commissioner of Chicago, has recently inaugurated a praiseworthy campaign of medical publicity, which, while it does not quite measure up to our somewhat advanced ideas, is at all events a long step in the right direction.]

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## REFILLING THE PRESCRIPTION.

THE MATTER of refilling prescriptions seems to be in an indefinite and unsatisfactory state, and badly in need of clearing up. There is no doubt that the promiscuous and indiscriminate refilling of physicians' prescriptions would (and where it is followed, does) constitute a mischievous practice, from everybody's point of view. On the other hand, to curtly prohibit the refilling of all prescriptions does not, and will not, dispose of the question. It cannot be so peremptorily swept aside. Patients will request refilling, and druggists will accommodate them; and that, because both patients and druggists realize that the refilling of certain simple and harmless prescriptions presents no reasonable ground of objection. Therefore, so long as no recognized line of demarcation is drawn between those that may and those that may not be refilled, the present unsatisfactory condition of affairs is likely to continue, in spite of professional protest.

Prescriptions fall, in this respect, into three classes. There is a certain class which should never, on any pretext, be refilled except upon the express instructions of the physician, and usually only upon a personal communication from the doctor to the druggist. This class of course includes all prescriptions which contain opium, cocaine, and violent poisons, and is usually covered by statute. At the other pole are those prescriptions which are manifestly simple and harmless, and not sufficiently serious in their character and function as to warrant another visit to the physician. And between these two classes lies an indeterminate group of prescriptions which may or may not lend themselves to refilling, according to circumstances.

In the case of the first group, it is not necessary that the physician should concern himself at all. The law has already, in almost every State of the Union, provided for them. The druggist who refills such prescriptions without express written instructions from the original prescriber does so at his own risk and under penalty. With regard to the second group, there is no need of the physician being too particular. As we have said, both patient and druggist realize that there is no real reason why these simple and common remedies should not be dispensed without recourse to the doctor every time; and the doctor might as well recognize the situation and abide by it. It is the third class of prescriptions that calls for some sort of tacit understanding between physician and druggist by which the latter may guide his conduct in the matter of refilling.

It is quite a common habit among physicians nowadays to have the words *"Do Not Refill"* printed on the prescription blanks; and in many instances the printers who print them, or the drug houses that furnish them, insert these words without consulting the physician who is to use the blanks at all. Unfortunately, however, the very commonness with which this habit is practiced has tended to rob the printed direction of its import; especially in view of the fact that the doctor, when consulted by the druggist, frequently repudiates it himself. Often a prescription bearing such a printed prohibition is brought in by the patient for refilling, and when the druggist calls the prescribing physician up on the telephone for authority, drawing his attention to the forbidding clause, the latter indifferently replies, "Oh, that doesn't mean anything", or "I meant to cross that out"; and so the druggist comes to have a very natural feeling of disregard for the printed words, especially in those cases, already referred to, where his common sense tells him that the refilling of the prescription is harmless and reasonable.

The whole subject was discussed by the National Association of Retail Druggists at its recent convention at Niagara Falls, and a resolution was adopted request-

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ing the medical profession to cooperate in a clarification of the situation. The Association recommended that physicians abandon, or altogether disregard, the printed form of prohibition, and make a rule of putting in their own hand-writing, just as they write the body of the prescription, the words *"Do Not Refill"* on all prescriptions which they do not wish refilled without their permission. And the Association undertakes, on behalf of the retail drug trade of the country, that such written instructions, limited to reasonable cases genuinely calling for prohibition, will be scrupulously respected, thereby bringing about a universal and satisfactory solution to the entire vexed question.

We cordially endorse and commend the suggestion of the National Retail Druggists. As intimated at the outset of this editorial, we realize the dangerous possibilities attending the indiscriminate practice of refilling prescriptions sheerly upon the patient's say-so; yet we are not in sympathy with those extremists who would enforce just as indiscriminate a prohibition against the refilling of all prescriptions. We therefore regard the proposition of the Druggists' Association as a timely and sensible one. Here, at least, is a point upon which the retail druggists and the physicians may get together in the interests of all concerned, and bring about a satisfactory solution to what is at present a vexed and chaotic situation.

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# Temperaments: Is There a Neurotic One?*

By Robert Jones, M.D. Lond., F.R.C.P. Lond., F.R.C.S. Eng.,

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(From *The Lancet.*)

**The Active or Responsive Type.**

LET us take, firstly, the active or the responsive type. We are all familiar with the strong tendency to action of some of our acquaintances or friends, as well as of some characters in history or fiction whose lives seem to be always directed outwards. The heroes of historical novels (as pointed out by Margaret Ashmun) and all knights of the sword and pistol are of this type. These persons are people of purposeful vigor, full of courage, and they love action, excitement, and adventure. They are the roystering dare-devils of heroic novels, brimming over with superabundant spirits and full of the zest of life, all action, and "damn the consequences." They are always optimistic, and they exhibit in their persons human possibility to the Nth Power. They are the giants and gods of mythology. Oliver Cromwell and Wellington remind us of the active type, and in Shakespeare Prince Hal and Hotspur are also of this type. D'Artagnan in Dumas' "Three Musketeers" is another example, and the personification of the type is shown in the classical descriptions of Hector, Achilles, Odyssey, Æneas, and possibly Joan of Arc, but it is not the fashion for women to be of the active resolute character, although about 1 in every 18 women is thus distinguished. As they are unable to pull down Hyde Park railings when they have revolted against deep-felt grievances they are laughed at and jeered when they attempt to leave the polite emotions for an active campaign. In further derogation of the gentler sex it is suggested that owing to the rarity of intellectual ability in women they have often played larger parts in the world's history than would be credited to men possessing similar achievements—that is to say, equal ability in man would not permit him to play a similarly large part. Mrs. Elizabeth Montagu, who obtained fame as a leader of society and an authoress, who attacked Voltaire; Mrs. Mary Somerville, who was acknowledged as a scientific writer on the spectrum and on Laplace, and possible Miss Hannah More, the intimate of Garrick and the authoress of religious tracts, were women of this class. In domestic life the Mistress Page of the "Merry Wives of Windsor" is a cheerful, sprightly, active, and quick-witted woman, who deserves her husband's confidence and has it by her faithful, true-hearted allegiance to him; she is not to be taken in by the "greasy knight" Falstaff. Mistress Ford is another delightfully happy character, the active sunshine of the home, transparent and cheerful. Richard III may be taken as a practical, direct, and promptly active man, the most wonderfully energetic and skillful murderer that ever sat upon a throne. A crooked and ambitious king, full of energy and insincere, he was a good example of the restless, active type.

**The Sensitive Type.**

The sensitive kind, which is our ideal of refined womanhood, is the next type. The emotional type that sympathizes with distress, that is quick to perceive and ready to respond, forms the list of attractive heroines of most of our love stories, and Shakespeare has them in abundance. Portia, the lady of Belmont,

*The Mid-sessional Address delivered before the Abernethian Society of St. Bartholomew's Hospital on June 8th, 1911.

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is the contemplative variety of this type, and she has been described by C. Cowden Clarke as a lovely specimen of a lovely woman. Like all distinguished characters, she has been roundly abused. She has been accused of pedantry and affectation, of conceit of learning, and of being the antipodes of modesty, but she showed courage at the right moment; she had ready wit and great presence of mind, and she is probably the most cheerful and pleasant spirited of Shakespeare's characters. Juliet is another of Shakespeare's love heroines, emotional and sensitive. From the moment she learns of Romeo's banishment, through her agonized pleadings with her parents to the subsequent interview with Friar Lawrence, as well as in the scene where she drinks the sleeping draught, we see her ceasing to be the weak loving girl of sixteen, pouring out the beauty of girlhood, and suddenly becoming a strong self-reliant woman in whom all the most powerful emotions and ardor of the really sensitive lover are fully portrayed. The delicate poetical love of Viola is the sweetest and tenderest emotion that ever informed a human heart. Jane Eyre and Lucy Snow are other characters which represent the sensitive temperament. Nor is this type limited exclusively to women; there are men of this type, and Mark Antony, if I interpret him rightly, was of this temperament. He was sensitive, and, although a warrior, he was effeminate and fond of pleasures. He married Fulvia, whom he repudiated for Octavia, and she was cast away for Cleopatra. Marcus Junius Brutus and probably Hamlet were also of the contemplative sensitive type. Job, Christian in the *Pilgrim's Progress*, and Robert Elsmere may also be placed in the same category.

### The Apathetic Type.

The other division is the mentally apathetic, the characterless or amorphous group, not because there is no character in these, but because most of the active and the sensitive elements of reaction are balanced and there is a suppression of any one definite element. These people do not feel deeply nor strongly, they are often heedless of others and are egotistical. Falstaff was of this type. He was charged with a host of vices; he was coward, swindler, liar, cheat, and braggart. He had a laughable effrontery, but he was no hypocrite. He was irrepressibly human and was always the friend of Prince Hal. There is much that is selfish and cold in many of this class, and they are not as a rule of the sensitive or the emotional set. Shylock the Jew, with his morality founded on disbelief in magnanimity and goodness, is of this order, and possibly so was Beatrice in "Much Ado About Nothing." Her marriage with Benedick was a *fin de siècle* union not founded upon love, but upon what might be called "friendly concoction." Cardinal Wolsey, although active and unscrupulous, was of the cold, calculating, and impervious manner, which, however, found its mastery in that of his king. Possibly Richelieu and Iago were also of this group.

I do not say these are the only types, as each of them is found mixed with the other, and even the resulting compound does not cover the whole ground of temperaments. Let us therefore see whether or not there is yet another kind, and which for the want of a better term we may describe as the purely "nervous."

### The Unstable or Nervous.

Into what class are we to place such characters as are portrayed by the Reubens, "Unstable as water, thou shalt not excel"? What about the many clever people who are often so scintillatingly brilliant that they can be best described as geniuses, but who are, nevertheless, so uncertain in their mental reaction that we are bound to call them capricious, fickle, explosive, and unreliable; persons whose friends are unable to predict what they will do next, who cannot be depended upon for kindness, devotion, or

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love even to their own relations and dependents, whose own natures know no standard of consideration, and who are described as wanting or lacking in mental poise. That such persons exist is without doubt, and some may be known among our own acquaintances. Take the well-known family trees which demonstrate insanity, epilepsy, suicidal tendencies, anti-social conditions, and bodily abnormalities, such as night-blindness, Huntington's chorea, muscular dystrophies, hæmophilia, or diabetes.

How are we to classify these people who suffer from such nervous diseases as are unknown among barbarous or even among half-civilized people—those, for instance, who are hysterical or eccentric, who are peculiar, or "cranky;" those who suffer from somnambulism or sleeplessness, from unreasonable irritability, from obsessions or nervous exhaustion, who may even be epileptic, yet are often extremely capable and often very talented and distinguished, but who nevertheless are abnormally susceptible to impressions, who suffer from functional neuroses of various kinds, who have neuralgias and headaches, who are dyspeptic owing to delicate digestions or premature decay of the teeth, who suffer from neurasthenias, and who are unduly sensitive to alcoholic stimulants, and who may even be moral degenerates, although possessing marked mental superiority in many directions? That such conditions exist compatible with high intellectual ability is seen from the history of many of our great men. Nature rarely begets a genius, but she does not often create imbeciles or idiots, she dislikes extremes of all kinds, and her tendency is towards the average or normal type both in mental and physical conformation.

**Genius and Nervous Instability.**

Many persons described as possessing genius in certain specified lines are, as J. Nisbet has shown, of this class. They are often predisposed to states of extreme irritability, and they suffer from intense emotional disturbances resulting in severe nerve storms or outbursts of motor violence which can only be described as that of subacute mania. The rapidity of their mental processes and the intensity of their conative tendencies when aroused know no control and such are often out of all proportion to the amount of the stimulus.

Into what class other than the nervous or the neurotic are we to enter such persons? In this analysis we are bound to give much consideration to the maxim that "like begets like," yet in several instances there has possibly been a segregation of some unit characters, although admittedly not on Mendelian lines. Shakespeare, the greatest poetic genius the world has ever seen, stands alone. He appears to have had no family history of ability, and little is personally known of him, which shows that mental characters, although distinguishable, are often unanalysable. The genealogy of the poet Cowper will illustrate my point. There was mental unsoundness on both sides of his ancestors, who were also distinguished for fame, as he was the grandson of a Justice and the great nephew of a Lord Chancellor. He suffered from religious hallucinations and had the strongest suicidal tendency, having to be cared for in an asylum for a period of over a year, yet he wrote "John Gilpin" when suffering from intense melancholia.

The poet Shelley had an insane ancestry; his grandfather suffered from melancholia and was a miser, but wealthy. His father showed similar tendencies. His mother was violent and domineering, but of lonely and solitary habits. At Eton he was called "mad Shelley," and the day before he was drowned at Spezzia, at the age of 30, he saw vivid hallucinations. In his picture his eyes are large and animated and wild, his voice was said to be high, weak, and discordant, and he was described as shy, solitary, anti-social, and the subject of

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ecstatic visions. Charles and Mary Lamb had a convergent heredity of nervous instability and nervous disease. Their mother died from dementia and paralysis at 50, and Charles died at 60 from what he himself described as the "cursed drinking." He was only 5 ft. in height, he stammered, and always suffered from headaches. At the age of 20 he had to be placed in an asylum, whilst his sister Mary stabbed her mother to the heart and killed her whilst insane. Wordsworth, who was a poet laureate, and his sister Dorothy are almost a parallel to Charles and Mary Lamb. Dorothy, like Mary, was insane and, like Mary, she was poetical and in the closest sympathy with her brother's pursuits. Dorothy Wordsworth was described by De Quincey as having eyes wild and staring, with an embarrassed and distressing utterance, a creature of fiery impulse. She later became mentally afflicted and never recovered her reason. Wordsworth himself described his sister as a "confirmed invalid." One of Wordsworth's children died from paralysis, another daughter was peculiar, being alternately gentle and vehement, and suffering from a form of insanity described to-day as of the "mania-depressive" variety. Wordsworth's father died at 42, and, like the fathers of many insane persons, was described as a man of great force of character, and his mother died from phthisis at 31.

The Coleridge family had a strongly marked insane history. The father of Samuel Taylor Coleridge was eccentric and absent-minded, and his mother is stated to have been uneducated and simple. He himself ran away from college, he quarrelled with his brother as a boy, and left home, being absent all night without apparent reason. Later in life he left his wife and children and went off to Malta. At the age of 30 he was broken down, and he died a wreck at 62. His son Hartley drank himself to death and died demented at 52. Southey came of an insane stock on his mother's side, who herself had paralysis in infancy. He had a maternal uncle described as "idiotic." His paternal uncle left his estate to a footman rather than to his sister who lived with him and who was dependent upon him. Carlyle described him as the "excitablest man" he ever met, and he died from dementia. His wife became insane, and also some of their children. He was described as having the most vehement pair of hazel eyes. The Sheridan family is notorious for neuropathic and psychopathic ancestry. The mother of Richard Brinsley Sheridan, the dramatist, was paralysed, and died demented at 42. His maternal grandfather also sank into dementia, and a maternal uncle was described as "absent-minded." He married twice, marrying the second wife a few weeks after the death of his first, and winning her, it is said, with copies of the love letters sent to his first wife. He died in debt and *déclassé* through drink. Only one son left issue, and he married into a healthy stock, of which famous issue has resulted.

Sir Walter Scott's family was permeated with nerve disorder. His father died from organic dementia, and his mother was aphasic and died from post-hemiplegic dementia. The maternal uncle also became demented. He himself had two sons who died childless, and two daughters, one of whom died from brain fever and the other, Mrs. Lockhart, from phthisis. His ambition to found a family "sleeps with him." Burn's father had an "ungovernable irascibility" and he himself was the victim of drunkenness and died at 37. One thing he loved since the age of 15, and that was "woman." He used to say his frame was blasted with a deep incurable melancholia which poisoned his existence.

Pope was deformed, rickety, and susceptible. A picture of him proposing to Lady Mary Wortley Montagu is in the National Gallery. Keats is described as

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neuropathic to the tips of his fingers. He had an ungovernable temper and was dwarfish, being only 5 ft. high. He had a passionate admiration for "'Fanny Brawne," and Shelley said his alternation of despondent gloom and emotional passion was exactly like insanity. He had no trace of eminence in his ancestry, and his temperament and genius are probably a good illustration of a spontaneous variation. Byron's mother was most unbalanced, and his maternal grandfather suffered from melancholia and committed suicide. Another relative committed suicide with poison. Byron succeeded his grand-uncle, the "mad and wicked" Lord Byron. His father, the "mad Jack Byron," died from suicide whilst insane. Byron's father ran away with the Marchioness of Carmarthen, an heiress, whom he married and killed by cruelty, and treated his second wife, Miss Gordon, the same. A converging heredity of this kind in the ancestors fills our asylums. Byron was correctly described by his most intimate friends as "too mad, bad, and dangerous to know." His daughter Ada married Lord Lovelace, and her son, the Viscount Ockham, served as a common seaman and worked at Millwall as a ship's carpenter. Byron was tortured by hallucinations, he drank, and died an epileptic at 36.

Milton was gouty and lost his sight from inherited blindness. He was said to be most tyrannical in his home life, and is stated to have led his daughters a miserable time, accusing them of selling their father's works and cheating. He had four children, a son who is said to have died in infancy from ill usage, one daughter who was blind, another a cripple, and a third one died later. His own brother was described as a "disreputable judge," and in the collaterals were many "ne'er-do-wells." I quote this instance, as insanity is only one of a group of neuroses, and genius has to be paid for at the cost of many penalties.

Let us now trace the inheritance and the mental reaction in the biographies of some of the most eminent musicians, and we shall see the same penalty for genius and the same ravages of psychosis and neurosis, using these terms in their pathological sense. The genealogy of the Bach family has been traced for 200 years, from the founder, who was a baker, to Sebastian Bach, the climax of musical talent. Bach had 20 children, but no issue remains to perpetuate the distinctions of the father. Although many of the Bachs married musical people the family record is one of sickness, blindness, drunkenness, and mental defect. Although we can breed Arab horses, Derby winners, and prize cattle, it has hitherto not been possible to produce a "musical breed," showing the unfitness of genius to survive in a world requiring many adaptations, and the incapability of genius to continue its own distinctions. Schumann suffered from recurrent melancholia with suicidal impulses. His mother was singular and eccentric, and a sister died from what we now describe as "dementia præcox." Wagner was a wild and erratic boy, filled with the wildest mysticism. He grew up with a violent temperament and his actions were often uncontrollable. He had a mania for silks and satins, with which he always dressed himself to compose music. When travelling he also carried these to decorate his rooms, and when he died he requested that his room should be upholstered in pink and pale-blue satin. Schubert was worn out and died at 31. Beethoven suffered from a form of paranoia described as mania migratoria; he was always changing his rooms and was paying for three or four different lodgings at the same time. He seems to have alienated his best friends through suspicious jealousy and false accusations. He began to get deaf about the age of 30, and in later life was completely deaf, so that much of the music he composed he himself never heard.

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**Concluding Remarks.**

From what has been said it will be readily seen that genius may often prove to be a golden idol with feet of clay. Man is firstly a vertebrate mammal with the instincts of the animal, but he has the power of inhibition and of auto-criticism, and through the influence of his environment he has attained a veneer of civilization, and it is interesting to note that in insanity these acquisitions of his progress are gradually dissociated and shed in the inverse order of their acquirement, until at last man is left a wreck barely above the level of the animal. The cause of this reduction in insanity is probably some physical process in the cortical cells, or, in other words, some chemical change has occurred in the neurones, either directly through the influence of some poison generated from within or introduced from without the body, or indirectly by means of the environment, favored, of course, by some inherited predisposition; and it is the study of man biologically—that is to say, the observation of his general activity or his total reaction under the influence of physical and psychological impressions—that enables us to infer the kind of temperament a man possesses. As we have seen, the predisposition to states of instability of control may be associated with distinguished mental superiority, and it is the degree of sensitiveness to pleasure and pain, the degree of motor restlessness and the degree of emotional tone exhibited by the individual which justify us in concluding that there is or is not present a temperament which we are entitled to describe as the neurotic, and it is by foreseeing this temperament that we can promote happiness and harmony where otherwise there would be intolerance, strife, and discordance. The more we see of the deviations of mental reaction and of physical structures the more we must be convinced that special modes of nutrition must have their special physiological expression, and that our work of prevention and relief as medical men is as important for the welfare of the community and the progress of the race as it must be for the well-being of the individual.

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**CONNECTION BETWEEN FEELING AND WILL.**

It will probably occur to you, and you have the right to ask, if Emotion or Feeling is not a thing by itself but is merely the tone of an idea, does not the very fact of a change in emotional tone connote a change in idea, and *ipso facto* indicate that we are in the presence of a delusion? I think that if you do so contend you are right, and, moreover, that there is present an actual physical basis for your contention, but you would get little or no support from the actual state of the present law. We do not really know what Emotion is, though we do know how intimate are its connections not only with the central nervous system, but also with the visceral organs of secretion and nutrition, of respiration, and circulation. The law says, "If you have an ill or prejudicial feeling towards another you must use your will to stifle it and not allow it to influence your action." How can you use your will to suppress a process which is really the chief constituent of your will at the moment? Feeling is the main constituent of Will, it is the element which turns the scale in the direction of action, and yet the law refuses to recognize affective insanity. As a learned judge once said to a celebrated lunacy expert, "When you talk of affective insanity you are talking to the wind!" Even Emanuel Swedenborg, imperfect physiologist though he was, recognized the connection between Feeling and Will, for he says "Those things which affect a man belong to his will, and those things which a man thinks belong to his understanding. Whosoever is not aware that affection is of the will confounds affection with understanding.

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# Diagnostic Signs In Nervous Diseases.

By Leo M. Crafts, B. L., M. D.
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CONVULSIONS in infants are always important, they indicate at once nervous instability in the child. They may be due to any source of irritation like simple gastro-intestinal disturbance, intestinal parasites, cutting the teeth, and the like. While the individual spasm may not be serious the outlook is always the danger of merging into actual epilepsy, and the most determined attention to the determining and removing the cause is essential.

Similar seizures in youth or adult, whether mild or profound, are always a source of either epilepsy, eclamptic, or due to gross cerebral lesions, more frequently the epileptic type, idiopathic, symptomatic. History ordinarily is important. Repeated attacks of partial blanks of consciousness with giddiness should receive early recognition, as petit mal, where vigorous treatment may save bursting into the major state. If the seizure with tonic and clonic elements retains consciousness showing the symptomatic Jacksonian type, the indication points strongly to gross brain lesion. The recurrence in any case of attacks of vertigo alone which cannot be traced to gastro-intestinal or aural conditions is as a single symptom always suspicious of brain tumor. Unremitting cepalalgia, projectile vomiting, inequality of pupils and monoplegias point equally in the same direction. Also at times hemiplegias, mental irritability, disturbances of memory, vision and hearing in varying combinations.

Various reflex reactions as a part of nervous sensory motor mechanism possess signal importance; loss of patellar reflex usually indicates interference with the sensory side of the arc, becomes more significant when accompanied by reflex immobility of the pupil, and inequality in size should be noted; these being present without incertitude or lancinating pains may be sufficient for early diagnosis of locomotor ataxia. Increase in patellar reflex or variability often accompanied by the same condition of other tendon reflexes with or without irritability is a common condition in simple functional nervous states of the neurasthenic order. In these also quite sharp attacks of vertigo are present and not infrequently in moderate degree of ataxia purely of functional nature.

Marked exaggeration of the patellar or other tendon reflexes, especially of clonic reaction, is present in any part, more often the ankle. The conclusion must be of organic inroad upon the motor tracts.

The great toe reflex, or Babinski's sign, is still of uncertain value, but may usually be attributed to involvement of the same regions.

The gait is usually important and requires analytic attention. The pure ataxic type points always to sensory lesion; the pure spastic form always to motor involvement; the mixed or spastic ataxic gait to trouble in both regions, and any case with apparent ataxic walk with materially increased knee jerk can never be tabes, but is always a combined sclerosis. A spastic element should always be looked for in such a gait. The simple paretic and ordinary hemiplegic gaits are always easily recognizable.

The cutaneous reflexes are of variable value and subject to chronic marked functional as well as organic modification; perhaps their greater importance is

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as an indication of the level of organic lesions in the cord.

Disturbances of cutaneous sensation obtained in widely different conditions, when not anatomical in distribution are usually functional; when anatomical, they indicate the level of sensory inflammation centrally. The pure type of thermo-anaesthesia being distinctly a hypermyelia.

Loss of muscular substance is due to the simple disuse or trophic interruption, or of the primary so-called muscular waste. When trophic, showing partial or complete degenerative reaction, it always means either destruction of the motor ganglion cells of the cord or a break in the connection between them and the muscular, as in acute poliomyelitis or peripheral neuritis. Lost control of the bladder and rectum, more especially the former, while possibly functional, almost unfailingly indicates a gross cord lesion, most frequently myelitis.

Loss of symmetrical half of vision in both eyes usually means injury to the optic thalmus.

Motor aphasia indicates gross lesion either of the cortical speech center, subcortical area, or the internal capsule at the knee. With double vision, involvement of hearing or the other cortical nerves the indication is involvement at the base of the brain, and more often of syphilitic origin.

Finally tremors have a certain significance. The neurasthenic is of fine vibratory amplitude. In paralysis agitans it is oscillating, rhythmic, increased on excitement, but always present. Movement of simple chorea is irregular, varying from slight to the extreme, jerky in character, localized or general. Choreiform movements occurring with gross lesions are usually confined to the areas of central inflammation. Various tics and spasms occupy an individual group and the intention tremor of disseminative sclerosis is recognized as being only that of finely adapted intended movement.

## TONSILITIS.

A local remedy for tonsilitis must not exosmotic enough to increase the circulation, or else their effect is too trandifference as to how much is swallowed and because it is pleasant and its action prompt, I find that they need no other instruction but use it thoroughly. As Glyco-Thymoline is non-poisonous, it makes no Drueck. A detergent antiseptic and a degree of permanency of effect. Many of the remedies are antiseptic, but they are anodyne effect is immediate and lasting. I instruct my patient to use it frequently fill two requirements, says Dr. Chas. J. sient and their use tires the patient. Locally I have grown to use but one remedy and that is Glyco-Thymoline. I prescribe equal parts of Glyco-Thymoline and water to be used in an atomizer. I get better results with this than anything else I have used. I always use it in an atomizer because gargling is necessarily painful, while a spray is not. Glyco-Thymoline promptly relieves the dry congested condition, and by adhering to the tonsil protects it from external irritation. Its and its action does not upset the stomach, but tends rather to assist the destruction of any of the plugs that may be swallowed.

I find by this method of treatment that my cases are nearly all cured in twenty-four to thirty-six hours. That I need no other medicament at all, because the system does not become clogged with toxines.

## THE SECOND SUMMER.

Experience has shown that during the second or "teething summer" weakened stomachs are strengthened, faulty metabolism is corrected, fatigued heart and circulation is supported, and many a tired, worn-out nervous system is restored to its proper tone by the systemic and intelligent use of small doses, 20-30 drops, according to age, of Gray's Glycerine Tonic Comp.

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# Treatment of the Morphine Habit

By John E. Darby, A. M., M. D.,

Professor Emeritus of Therapeutics in Medical Department Western Reserve University.

THE prevalence of the morphine habit and the difficulty and unsatisfactory results of its treatment are well known.

The treatment of morphinism as usually practiced, that is, the withdrawal of the drug, whether immediate, rapid or gradual, is accompanied with such intense craving for the drug and such horrible suffering from its abstinence that the treatment can only be successfully carried out when the patient is under restraint in a hospital or sanitarium. The consequence is that the general practitioner will seldom undertake the treatment of morphinism but turns the victims over to the "opium joint" where they frequently fall into the hands of quacks, or those occupying the border line of medicine and quackery.

Two very important questions present themselves in this connection, viz.:

1st. What causes the craving and the abstinence symptoms on the withdrawal of the drug?

2nd. What becomes of the immense doses of morphine which are frequently taken, and why do we not get symptoms of acute poisoning?

When morphine is administered in excess a portion of it escapes from the body unchanged, principally through the bowels, although traces are found in the urine, saliva and milk of nursing females.

Faust, in a recent research on this subject, recovered from the feces of a dog 66% of the morphine administered hypodermically, when the poisoning was acute. In the feces of the 21st to the 24th day of the administration he could recover only 26%, and from the 36th to the 40th day only 4%, and if longer continued none at all, and this notwithstanding the fact that the later doses were very much larger than the original doses —fifty times the original amount.

This would seem to show that in morphinism little or none of the morphine taken escapes from the body as morphine, but undergoes oxidation in the body, converted into oxydimorphine or oxidation products, and is slowly excreted as such. Oxydimorphin has been found in the excretions of morphine patients.

Marmi supposed that the symptoms seen after the abrupt withdrawal of morphine in the opium habit was due to the oxydimorphin remaining in the tissues. Clinical observation certainly favors this supposition.

Just what role this oxydimorphin plays in the morphine habitue has not been satisfactorily determined, but it seems probable that it acts antagonistically to morphine, that it forms an antidote to the immense doses in which the drug is frequently taken and prevents the symptoms of acute poisoning—that it is this which creates the irresistible craving for the ever-increasing quantity of the drug—that it is this which compels the habitue to continue a habit which he loathes, which he knows is disgracing, debasing and slowly killing him, but which he has no power to stop. That it is this which causes that terrible train of symptoms and suffering which follow the withdrawal of the morphine, the fearful neuralgias, the persistent insomnia, the nervous restlessness and depression, etc., collectively known as the abstinence symptoms.

Ordinarily, as we have seen, the oxydimorphin is slowly excreted, but fortunately its excretion may be greatly hastened by increasing the activity of

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the excretory processes, particularly the skin, salivary glands and bowels.

**Treatment.**

To prepare the patient for treatment the bowels should be freely moved by a cathartic—castor oil preferred—and a thorough warm bath be given to the patient.

As it is always good treatment to "remove the cause" the first effort will be to remove the oxydimorphin from the system, and as this is most easily or principally eliminated through the skin, the chief therapeutic measures will be *diaphoretics*. The choice of these will depend on the condition of the patient and the conveniences at hand. The patient should be kept in a profuse diaphoresis for twenty-four to thirty-six hours if possible, as it will require about this length of time to eliminate the poisons and prevent the abstinence symptoms. In some cases, doubtless, a shorter treatment may be satisfactory. Six or eight hours of profuse diaphoresis will often relieve the craving and abstinence symptoms for several days, and what is exceedingly interesting to note, will render the individual almost as sensitive to morphine as though he had never used it, ⅛ of a grain being often sufficient to relieve pain or produce sleep. And this too in individuals who had been taking 40, 50 or 60 grains daily for months. But such patients are but partially cured, and unless the treatment is continued to the full time enough of the craving and abstinence symptoms remain to induce them to resume the habit.

Few patients are able to complete the treatment in one seance, but must be treated as their strength will permit.

If the patient is able to sit up, a simple home modification of the Turkish bath may be used with good effect. The patient is seated on a wooden chair, naked, and a lighted alcohol lamp is placed under the chair. The patient and chair are then wrapped in a coverlet or blanket, when the heat of the lamp will soon cause profuse perspiration. Accidents sometimes occur in the use of this means, the lamp being upset and the patient burned. A safer method would be to use, in place of the lamp, bricks or stones which have been thoroughly heated in the oven.

If the patient is in bed, sweating may be induced by placing a lighted lamp on the floor beside the bed, and inverting over this a large funnel to which a pipe or tube is attached to conduct the hot air underneath the bedclothing. A cradle should be placed over the patient to raise the bedclothing from the body so the hot air may surround the patient. Placing bottles of hot water in the bed around the patient is an efficient means of inducing diaphoresis. Care should be used lest the bottles are placed too near the patient and he be burned.

The hot pack may be used.

These and other means will present themselves to the intelligent physician to produce diaphoresis. Pilocarpeni may be used in connection with any of the above mentioned means both to increase diaphoresis and for its sialagogue action, but if the heart is very weak it should be used with care if at all.

The sweating should be continued as long as the safety of the patient will permit. Some patients can endure eight or ten hours of profuse sweating without difficulty or danger, while others are exhausted in three or four hours. As soon as the sweating has been carried to the limits of safety the patient should be sponged off and placed in a dry bed to rest and recuperate.

While this treatment is being carried out the patient should be carefully watched and strychnia digitalis, quinine, nitroglycerine, whiskey, etc., administered as required. Water may be given freely to promote sweating, and easily digested food as milk, milk punch, eggnog, or the predigested foods, may be given at intervals.

After a day or two, or as soon as the

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patient has rallied sufficiently, the sweating should be repeated, and this treatment continued until the patient has sweated at least twenty-four hours—thirty-six is better. When this is done, there is little or no craving for the "dope" and the abstinence symptoms are largely or entirely avoided. Sometimes a serious diarrhoea continues for some time and may need astringents, etc., to control it, but the morphine habit is gone. The oxydimorphin or oxidation products have been eliminated and we have a simple case of mental and physical debility to treat. Tonics and time will be required to restore the patient's strength. It may require several months for the patient to recover his normal mental and physical vigor, and until then it would be unwise to attempt to resume the active duties of life.

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### CALCIUM CHLORIDE.

Moncany in *La Clinique* recently gives an interesting resume of the therapeutic applications of calcium chloride. This remedy has been employed more particularly in traumatic hemorrhage, purpura hemophilia, hemorrhagic small pox and other hemorrhagic diseases, and in hemoptysis, where its usefulness is a cause of difference of opinions. It has been administered to increase the tonicity of the heart and the blood vessels in certain forms of headache, neuralgia, pruritus, eczema and in urticaria. It has been recommended in obstinate diarrhea, epilepsy, laryngismus stridulus, convulsions, neurasthenia, hysteria and mental alienation; its results in these cases are considered to be due either to its calmative or to its recalcifying action. Excellent results have been reported in the treatment of chilblains, acute edema, serous effusions, edema following vaccination and viper bites. The injections of anti-diphertic serum are sometimes followed by eruptions, and these eruptions are averted by calcium chloride, one dose administered on the day of the injection and the two days following. The dose of the calcium varies with the amount of serum used, and must be increased when several injections have been given. Moncany also refers to the use of the calcium chloride in albuminuria, nephritis, pneumonia, tuberculosis, pregnancy, coryza and ricketts. Administration per os, rectum and subcutaneously. Wright found that the subcutaneous method tended to cause sloughing. Experiments on dogs showed that the intravenous method is frequently followed by thrombosis, and was therefore condemned. Enemata are readily absorbed and well born by the patient. The The usual practice is to give the calcium sorbed and well borne by the patient. The continuous results of these salts are apt to produce results the opposite to those desired, and it is therefore advisable at times to discontinue their administration for a time, say every fourth or eighth day. It is contraindicated in alcoholics, elderly persons, and those suffering from plumbism or those predisposed to calcic retention or atheroma. The cautious administration of the drug by the mouth in small divided doses, with brief intervals of cessation, seem to obtain the best results. Opiates may be combined with it in the treatment of hemorrhage. An intensely disagreeable taste has long acted against its general employment. This is a bitter saline taste, and is best masked by cinnamon and peppermint. Moncany gives several formulas, one of which is ten grammes of the calcium chloride in three hundred grammes of water flavored with peppermint. Two teaspoonfuls of this mixture is given for one dose. The following formula, given by Roger, is fairly palatable: Calcium chloride, four to six grammes, syr. orange peel, 140 grammes, brandy one fluid ounce, tincture of cinnamon, four grammes, and water 60 grammes.

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# Medical Colleges in Small Cities

By J. A. Burnett, M. D., Marble City, Okla.

ACCORDING to my opinion from this on no state board should recognize medical colleges located in cities of less than 50,000 inhabitants, and they should take the government statistics as authority on this ruling and not what is claimed by the city or the college located in it. There should be only one exception to this ruling and that is when a college is located in a city of less than 50,000 inhabitants and there is another city by it, they only being divided by a river or state line, etc., and both contain as many as 50,000 people, then it is practically one city as far as college advantages are concerned and a medical college so located should as far as this requirement is concerned be recognized. It is an evident fact that a medical college located in a small city cannot furnish proper dissecting material and cannot furnish clinical material that is sufficient. Of course, dissecting material can be shipped in from larger cities, but as the cost is heavy the college will not go to the expense for such as it should and too small amount of material is furnished the students and often material that is not fit to use and would not be used by colleges that have an abundance of dissecting material to draw from. The standard of medical colleges has been raised in all or most all manner except in regard to the size of the city where it is located. This is an extremely important requirement that has been overlooked and I hope that this matter will be seriously considered by our state boards in the future and that this requirement will be inforced by all our boards. If I am not mistaken there was a state board that would not recognize medical colleges in cities of less than 50,000 inhabitants some ten years ago, or at least considered this matter and published something concerning it. It seems to me that it was the Ohio State Board.

Practically all of the so-called proprietary schools located in small cities have voluntarily suspended work and a few of the state medical schools located in small cities have been suspended, and it is time that the others, either state or proprietary, should voluntarily suspend or be forced to do so by the state medical boards. It is just as essential to be equipped in one way as in another and while we are raising the standard we should do it with justice to the medical profession in general.

I truly hope that this suggestion will be discussed and seriously considered by the Council of Medical Education and the various state boards of medical examiners, and I feel sure that this is a matter that will in the near future receive attention. This much-needed requirement could be elaborated on to a great extent but this is not my object to fully discuss the matter, but to bring attention to it and hope to see it fully discussed by others, and I feel sure it will be. Another thing that should be condemned and that is the combined course of science or arts and medicine in six and seven years. The two degrees, A. B. or B. S. and M. D., taken in six or seven years, cannot be up to the standard, one or both of them are inferior grade no matter what college conferred them. The love for titles and degrees for a little extra time should not be tolerated any longer. State boards should not recognize diplomas of a combined course. All four years of a medical course should be given in the same city. A medical department of a state university or of any university should be located in the same city that the main university is

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located in. A medical department of any university, located in a different city from the main university, is practically not a medical department, as far as university advantages are concerned. All instructors, assistants and professors in a medical school should be graduates in medicine, unless, one exception, and that is the professor of medical jurisprudence. There is a tendency at present for non-medical graduates to fill the chairs of chemistry, physiology, anatomy, bacteriology, etc., in several schools, and if this continues non-medical graduates will soon be filling the chairs of practice of medicine and surgery, obstetrics, etc.

No partial course medical colleges should be recognized by state boards the schools giving only the first one and two years should be wiped out of existence. Most all such courses are given by non-medical graduates. My object is to bring attention of the profession, and especially to state boards, in what seems to be a little graft in raising the standard of medical colleges and I hope all will give this due consideration.



### THE PREMATURE BABY.

John Zahorsky, in the *Interstate Medical Journal,* lays down the following principles for the care of premature infants:

1. The premature infant should be kept warm.
2. It should receive abundant nourishment.
3. It should be guarded against infections.

It is well to emphasize here that the most common mistake made by nurses in their effort to keep the infant warm is to overdo the matter. The premature infant is just as susceptible to heat as to cold. How common it is to find a premature infant with a marked elevation of temperature entirely due to the application of too much heat. The feeble infant should not be kept too warm. A difference of at least 6° F. should be allowed between the body temperature and the surrounding air. This leaves a margin for the dissipation of heat from the little body and stimulates internal oxidation. The temperature for the incubator according to Budin should not be over 86° F., and it is safest except for infants weighing not more than 1,200 grm.

It is a common misconception that the incubator is a great life saver. While the regulation of warmth has a high importance, the principal difficulty in keeping the premature infant alive is the supply of food. It needs proportionately at least four times as much food as an adult. The adjustment of the alimentation of the caloric needs of the body is one of the most valuable methods of feeding such cases. It will not do to prescribe a minimum quantity to be given every hour. The physician must know that the infant requires a certain quantity of food having the needed calories, and great pains must be taken to feed the baby this amount.

The premature baby cannot wait three days for its mother's milk. It must have a little food soon after birth. Breast-milk from another woman is best. When this cannot be obtained, whey or peptonized milk may be used. At first the milk is given in small quantities, but it must be increased daily until at the tenth day an alimentation having an energy quotient of 120 calories is administered.

The premature infant most commonly dies of apnea, a sign of exhaustion which is characterized clinically of cyanosis. These attacks of cyanosis are clear indications that something is wrong in our regime, and inquiry must be instituted at once in the heating apparatus and especially in the food supply. While insufficiency of the food leads to cyanosis, too much food often leads to dyspepsia, and this again to fatal cyanosis.

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# CURRENT MEDICAL LITERATURE.

## FOLLY OF PACKING IN POST-PARTUM HEMORRHAGE.

WM. GILLESPIE, in *Lancet-Clinic,* points out the weaknesses, the absurdities and the uselessness of this method of treatment.

In the real typical post-partum flooding, nothing could be more absurd than to attempt this method of controlling the hemorrhage. With the flood-gate open and the stream of blood gushing to the full capacity of the vagina and squirting to the knees of the patient, before the necessary preliminary steps could be taken to begin to pack, the life of the patient would be extinct. There is but one method of treatment which the writer has found to be prompt enough to be safe and effective; namely, carrying one hand into the uterus and making vigorous friction with the other upon its fundus. Time cannot even be spared for preliminary care as to asepsis. An antiseptic solution should always be within easy reach, and if the internal hand is dipped into this the chances of infection are lessened. Ergott should be pumped under the skin in full doses until the uterus is ergotized, and a stream of hot water may with advantage be carried up alongside the internal hand, but these things must be prepared by others. The one who temporarily stems the tide must not for an instant remove either hand from its appointed task. The internal hand should, before its removal, look for any remnants of placenta, placenta succenturiata or submucous fibroid. The removal of placental remnants will take away the cause of hemorrhage, the discovery of a submucous fibroid will give warning of the danger of subsequent hemorrhage or sloughing. When uterine contraction does not stop the flow, pull down the uterus and look for and suture the laceration in its tissue, which is almost certainly present.

There are many uncertainties in obstetric practice, but of this one may be quite sure: He who believes he has saved a life, in real post-partum flooding, by tamponing the uterus deludes himself, for the fate of such cases is often decided in the first minute of the flooding.

The continuous hemorrhage of moderate amount is almost certainly due to some of the conditions we have enumerated, and will yield to the treatment suggested.

Our forefathers knew that the only safe uterus was an empty one. One modern writer suggests a plan of treatment which ignores this knowledge, which distends the organ so that it can not retract when retraction is our only real safety, and which will stimulate contraction, to be followed by relaxation and more hemorrhage. If the uterus was a hollow, inelastic cavity, one might reasonably expect by tight packing to control hemorrhage, but the organ has, until a few minutes ago, been distended to a size sufficient to accommodate a hemorrhage of sufficient magnitude to destroy life, and the larger the uterine cavity the more copiously will the blood flow.

At a little later period a hemorrhage from a disintegrating fibroid may well be controlled by gauze packing until preparations can be made for its removal.

If the truth were known, we think it quite certain that the reputation of this method has been earned by its apparent success in cases of overlooked deep cervical lacerations, and from its being used in uteri where, from the character of the labor, the attendant feared that hemorrhage would occur. As hemorrhage occurs in only a small minority of the cases which present its predisposing factors.

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it is easy to build up a false reputation for any treatment employed to combat its occurrence. In the early months of pregnancy it would not be so difficult to control hemorrhage by this method, for the uterus is small, and may be filled by gauze to its full capacity yet in the experience of the writer it has never seemed to be indicated. Many years ago he imbibed the doctrine that in abortion one thing was certain, namely, the empty uterus does not bleed. Therefore, as long as bleeding continues, he feels safe in assuming that some of the product of conception remain in the uterus, and with their removal hemorrhage has always ceased. That this is not his individual experience is amply attested by the testimony of others who assume as true the doctrine quote above.

Uterine packing serves a useful purpose in the presence of hemorrhage before labor or abortion has occurred, but we wish to serve the interests of humanity by assuring the inexperienced practitioner of the folly of such methods in post-partum hemorrhage at any period of gestation.

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### PROPHYLACTIC PERINEAL STITCH.

A. Laphorn Smith advocates the placing of a perineal stitch as a measure to prevent laceration during labor, and in a communication to the *Medical Record* describes the technique as follows:

Just before the child's head comes down on the perineum the patient is anesthetized and brought across the edge of the bed with the feet held by a twisted sheet or leg holder. The perineum is sterilized with a soap and brush and mercuric bichloride, and then with the large curbed perineum needle on a handle, furnished by Chapman of Montreal, held firmly in the right hand, and with the thumb of the left hand in the anus and the left forefinger in the vagina the needle is entered at the base of the lesser lip on the patient's left, taking in the levator ani muscles and passed rapidly under the vagina and about two and one-half inches above the fourchette, coming out at the corresponding point on the woman's right side. A silkworm gut suture is threaded into it and the needle is withdrawn, followed by the silkworm gut, the two ends of which are caught up with two Péan forceps. A second one is passed in the same way an inch lower down, but taking in the muscles of the perineum. We can generally tell beforehand, by the rigidity of the perineum, whether the tear is going to be a bad one or not. In the former case we can put in a third stitch, which would take in the sphincter ani on each side of the middle line. Delivery can now go on naturally or artificially, but as soon as the placenta has been delivered the perineum is inspected under a good light and a stream of water, all clots being rubbed off with the finger; the stitches are tied from above downward, when we will find that there is absolutely accurate coaptation of the separated parts.

Speaking of the light in the confinement room, especially of the poor, we should always take steps before delivery to provide a good light for two reasons: that we may see how dirty the place is and second to see what we are doing. As a rule, a darkened room means a dirty and badly ventilated one. In the daytime arrange the patient so that the perineum will be facing a bright window; and if the confinement is likely to take place at night provide beforehand for a good light easily available for examining the perineum. When we hear physicians say that they have never seen a tear of the perineum they may be telling the truth, because they have attended all their patients in a dark room. The presence of the silkworm gut stitches, placed as stated before the head comes through the perineum and hanging loosely attached by their ends to a Péan forceps, does not interfere with the termination of the labor in any way; not

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even when the forceps is required. If by keeping the pain under control and the head well towards the symphysis, there has happily been no laceration of the perineum, no harm is done by their having been introduced, you simply take off the forceps and draw them out, while if the perineum has been lacerated more or less, it is a great advantage to save time by having them already in, but still more by having them exactly in the right place to bring the lacerated surfaces together, just as they were before the delivery. The placing of the perineal sutures before the tear occurs is an instance in which "an ounce of prevention is worth a pound of cure."

## X-RAY EXAMINATION IN GASTRIC CANCER.

Faulhaber, in *Deutsche Archives Klin. Med.*, discusses the value of the Roentgen rays in the diagnosis of cancer of the stomach, basing his article on eighty-six cases personally observed.

The bismuth meal was used in most cases, but zirkon oxide also gave good results. The presence of a tumor is, for the most part, recognized by a defect in the filling of the organ. In the pylorus, the most frequent site of the growth, interference with the regular paristalsis is a sign of much value, particularly as this region varies considerably in site, form, and size in different individuals. Very small growth are not likely to be detected, but it is probable that a growth the size of a walnut might be observed. The smallest tumor observed by the author was four to five cm. in diameter.

In all cases, when a clinical diagnosis was possible, the Roentgen examination gave a positive result. There is the further advantage of localizing the growth and of estimating its extent. A palpable tumor of the stomach may have its site on very different portions of the organ, and its exact position, whether in the smaller curvature, or pylorus, or elsewhere, can be accurately determined only by the Roentgen method. The great advantage of the examination is best seen in a comparison of cases in which the clinical diagnosis is doubtful, thirty-one per cent of the writer's cases failing in this class. Even when the usual evidence of the disease is present, the absence of a palpable tumor is frequently an important lack in the evidence, for it is indeed the most important of all the clinical signs. It is just in these cases that the Roentgen examination proves most useful. When the site of the growth is indicated by the skiagram, the observer is often able to palpate it, or the mass can be felt when standing or on forced inspiration.

In 14.3 per cent of his cases, the observer was able to make out the presence of tumor when his touch was aided by the additional information obtained by the picture of the growth. In a large number of cases, 30.4 per cent, a growth was detected when it proved impossible to feel one. This observation certainly establishes the Roentgen method as of high value, the presence of a tumor being proved when it could be recognized in no other way.

Growths at the pylorus can almost always be palpated, but when the mass is not so favorably situated this procedure often proves impossible. In cases of general contraction of the organ from cancerous infiltration, in growths of the fundus, in tumors of the pars media, overlapped by the liver, and even in pyloric growths concealed by an enlarged liver, the skiagram gives positive information, and enables the observer to recognize definitely the presence of a growth.

The extent and site of the tumor are useful data in determining the advisability of operation, and even more frequently in indicating the non-operability of a given case. Small growths at the pylorus, not adherent to surrounding structures, are the most favorable for

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medical operation, and the recognition of the existence of such conditions is materially aided by the results of the Roentgen picture. Negative findings are often valuable when abdominal tumors lie in the neighborhood of the stomach. It is often possible to show that they are not connected with this organ, and again there are sometimes symptoms highly suggestive of gastric carcinoma in which this condition can be positively excluded. A series of diagrams of the Roentgen pictures accompanies this review.

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### BASIS OF EMOTION.

If we do not know the real nature of Emotion we do recognize that it is a quality of ideas, that certain forms of ideas have Feelings of kind associated with them, and so we speak of sad or of joyful ideas, as also of indifferent ones, in which no striking emotional tone is to be noted. Now these ideas, we must conceive, have organized physical bases upon which they must depend for their integrity, and as long as these substrata remain entire the disposition, the likes, and dislikes must remain the same. It may be possible by argument, education, or necessity to change a man's ideas and thereby to produce a preponderance of emotional tone in a direction contrary to what it was, but the old ideas with their *propria* of tone are not destroyed and usually remain in consciousness even under the new mask, whilst they materially modify any conduct which the new ideas may suggest. As the popular saying goes, "The man still remains faithful to his old love," and is easily brought back into its tracks. Suppose, however, that from disease of an irritating or destructive nature—a lesion, in fact—certain tracts of tissue become involved which are the carriers of grades of ideas with their accompanying tones, it is evident that the whole trend of nature and education may be altered and Emotions of a contrary form set up which suggestion and expostulation are incompetent to cope with. But if so, this must be due to disease or to such disuse of structure as amounts to a practical atrophy and loss of competence to function. This, then, it is which turns love to hate; not a change due to the substitution of the quality of an idea into one of an opposite kind, but the substantial obliteration of a material which functioned in a definite way and its replacement by the growth of a different set of processes.

You, then, may say that this process of changed emotion by the growth of opposite ideas of which Emotion is the appanage can surely not be distinguished from a delusion, is in fact a delusion, and must be treated as such, I repeat that I am quite prepared to grant the force of this argument, for to my mind Emotion is the local sign of the idea, and on the theory of the physical basis of mentation it is the key to the position, but to the outsider what is most striking is the loudness of the tone, and he is apt to ignore the fact that it denotes a change in the structural basis of ideas, supplemented as these must be by arguments, started from the new trend and reinforced by association and its recognized laws. Emotion is, etymologically, the moving force of the idea; more than anything else it causes the idea to issue in action—this it is which stirs in oratory, which makes the enduring obstinacy of the martyr, which forces on the impulsive acts of the murderer, and which determines the course of the social system to a greater extent than any other factor which we can adduce from the analysis of a mental content. There are persons in whom the emotional tone is feeble, and this placidity has its advantages, for it saves them from the perturbation, now on the crest of the wave of success, now in the trough of failure and despair, of their more sensitive compeers; it makes its possessors exponents of what is called the calm logic of facts, though it de-

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prives them of that cataractic force which can overcome Reason by the *vis viva* of Feeling. There are many who are unconscious of the idea when in the presence of strong Emotion, and the accumulated tone when many associated ideas are acting in harmony blinds the agent to the nature of his thought and urges him to an action which, though consonant with his Feeling, is opposed to his best interests. Says King Lear:—

"The tempest in my mind
Doth from my senses take all feeling else."

Shakespeare did not know the word "Emotion," at least he never once uses it, but he was quick to recognize the effect upon consciousness of strong Feeling. I can quote the case of a man whose early life was not what it should have been, and who, being placed in a position of great responsibility, got to feel his inadequacy upon moral grounds to retain it, yet to his friends there was no insanity present; he simply said that he was depressed and made no sign, gave no outward indication by conduct or conversation. All the same, his excessive emotional tone incapacitated him from following his vocation, and whereas matters which formerly caused him not a second thought now became so obsessional as to constitute an actual derangement. "The evil that men do lives after them," says our great poet—it is, unfortunately, true that on occasion it becomes dominant during life and shatters the integrity of mind as a whole, leaving an impotent detritus.

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## SALVARSAN INJECTIONS.

Goldenberg and Kalishis, in the *New York Medical Journal,* states that the effect of salvarsan injections on the course of the syphilitic infection, as evidenced by the outcome of the Wassermann test, is an exceedingly interesting and important phase of the question. In our previous paper, says these authors, we reported the results of numerous tests in about forty of the patients. Most of these patients were injected intramuscularly, some subcutaneously. A very small percentage of the cases gave negative reactions, and some of the latter have since given positive reactions. However, since we have adopted the intravenous method as a routine procedure, the percentage of cases that have remained positive after one or two intravenous injections is smaller than with our first series of cases. Unfortunately, we are not in a position to present figures in this connection, because it is our custom to begin mercurial treatment within a few days after the patient has received the intravenous injection of salvarsan. By the combination of salvarsan and mercury we have been able to bring about a negative phase in the vast majority of our cases within a month or two. As to the permanence of this negative phase we must await the verdict of time. It is significant that many cases of tertiary lues, latent or active, with a positive Wassermann test in spite of numerous mercurial cures, promptly became negative after salvarsan therapy. In considering this phase of the question in the future, for this is surely a problem of the future, it should be taken into consideration whether the drug was given intramuscularly or intravenously, the dose, the stage of the infection, the nature of the lesion, and the period of time that has elapsed since the last injection of salvarsan.

### Conclusion.

In conclusion, we feel that salvarsan has a large field of usefulness, acting beneficially on all forms of active specific lesions. The general condition of the patient is improved markedly, cachexia disappearing, while the paint of specific lesions of the bones, throat, etc., remits with marvellous rapidity. It is especially indicated in all cases of primary and secondary syphilis to destroy rapidly the spirochætæ, thus lessening the danger of transmitting the disease

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to others. It is indicated in other cases of lues that are refractory to or have an idiosyncrasy for mercury, and in cases of mercurial nephritis. Where important structures are involved, and destruction is impending, salvarsan should be given promptly. Among the contraindications may be mentioned organic nephritis, diabetes, ulcer of the stomach, organic heart disease of any form, aneurysms, cerebral hemorrhage, marked arteriosclerosis, chronic alcoholism, and extreme old age.

The debatable question, it seems to us, is not when to use mercury and when to use salvarsan, for there is no antagonism between these two drugs. From our present knowledge we recommend strongly the use of both in the treatment of syphilis. First an intravenous injection (or two injections) of salvarsan, which should be followed by a thorough course of mercury, preferably by injection, and, finally, if necessary, an additional injection of salvarsan.

We now have two powerful drugs at our command for the treatment of lues, and both should be used in the fight against this menace to the human race.

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## AUTOMOBILE RIDING FOR WOMEN.

Edgar, in the *American Journal of Obstetrics,* declares that the rapid displacement of air strikingly increases the red blood cells and hemoglobulin. The same results were seen in anæmic subjects. The urinary findings indicated, in general, increase of nutrition. Sleep was improved more than attributable to the fatigue of the long journey, doubtless due to the outdoor life. On the other hand we are safe in assuming that there is more traumatism, more vibration, more jars associated with the motor than with the horse-drawn vehicle. This is particularly true with cars having an overhanging rear seat, where the woman usually sits. Another fact is that the distance traversed at one sitting is almost invariably greater in the motor car. The most important difference between the two types of conveyance is the effect upon the nervous and circulatory system. Some individuals cannot adjust themselves to the use of the automobile for more than short runs at low speed. Such persons sit with tense muscles, rarely relaxing, the tenseness increasing with the passage of an approaching car. They are constantly on the lookout for trouble, and innumerable possibilities of wreck are conjured up from any objects passed. Hemorrhoidal conditions are invariably aggravated by constant motoring. The same is true of patients having pelvic or abdominal congestion or inflammation in general. Patients having backward displacement of the uterus always suffer from motoring to any extent. The unfavorable influence of the automobile upon pregnancy has been somewhat exaggerated. In women having relaxed uterine supports with the associated tendency of the uterus to sink low in the pelvis, miscarriage may be induced by excessive motoring. To many women of middle life who have had an abnormal menopause, have taken on weight so as to make locomotion and exercise difficult, or are enfeebled by unoperable causes, the automobile has proved a blessing.

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## POLIOMYELITIS FINDINGS.

Following are the conclusions of the Poliomyelitis Committee of the Medical Association of the District of Columbia:

1. The cerebrospinal fluid in acute anterior poliomyelitis is generally clear; there is in the early stages of the disease an increase of pressure although this is not generally pronounced and there is usually an increase of the protein content sufficient to give a positive Nonne-Alpelt and Noguchi butyric acid reaction.

2. In the earlier stages of the disease there is more or less pleocytosis in the

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spinal fluid. There are many polymorphonuclear leucocytes which are probably dependent upon the reaction of the meninges to the penetration of the virus into the central nervous system.

3. The increase of polymorphonuclears disappears a few days after the acute onset of the disease and is substituted by a lymphocytosis with some plasma cells and sometimes a few mast cells.

4. The disappearance of the polymorphonuclears is brought about through the rapid and vigorous phagocytic activity of the macrophages which sometimes contain twenty or more rests of the polynuclear elements.

5. These degenerated polymorphonuclear leucocytes show in the framework of the macrophages very different degrees of histo-chemical changes which are indications of rapid processes of digestion.

6. The presence of the altered red blood cells in the spinal fluid is probably dependent upon capillary hemorrhages in the spinal cord which is a consequence of the selective preference of the disease for the spinal vessels.

7. Körnchenzellen, altered lymphocytes and other mononuclear elements are commonly present in the fluid until after the fever period.

8. In our histological study of the spinal fluid in the disease, we did not observe any stained bacteria.

9. The similarity of the histopathology of the spinal fluid in poliomyelitis to that of the fluid in some protozoan diseases affecting the nervous system is argument in favor of the protozoan nature of the virus in poliomyelitis, even though some other investigators claim the disease to be produced by a much smaller organism.

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## HYDRASTIS.

Felter, in the *Eclectic Medical Journal,* declares that hydrastis is entitled to the highest rank as a mucous-membrane remedy. It is soothing, allays irritable conditions and proves permanently tonic to the mucous structures in any portion of the body. Few agents have given us better results in the multiform abnormal conditions of the stomach and bowels resulting from the effects of summer and extreme thermometric changes and the disorders arising from the varieties and conditions of summer foods. The prevalent custom of consuming large quantities of ices, ice cream, iced drinks and particularly ice water, produces in some individuals a distressing condition of irritability of the gastro-intestinal tract, with symptoms of uneasiness and gnawing and sometimes burning, and alternate constipation and diarrhea. Depression is a marked feature, and food distresses, and the whole system partakes of the general discomfort. For this condition we have used hydrastis with better results than have been obtained from other agents. From three to five drops of specific hydrastis may be taken in cold (not iced) or hot water, preferably the latter, every four hours. In some cases, where there is dryness of mouth and lack of secretion, a drop of tincture of capsicum renders the hydrastis more efficient. In this so-called "ice-water dyspepsia" we have had good effects from colorless hydrastis with specific nux vomica, fifteen drops of the former with two drops of the latter, also taken in hot water.

After a prolonged siege of diarrhea, dysenteric diarrhea, or after acute dysentery, there often remains an irritable condition of the bowels, which is both persistent and distressing. Here again hydrastis operates kindly and give decided tone to the mucous surfaces. If the tendency is toward constipation, then larger doses may be used—ten drops at a dose every four hours.

As a remedy for the catarrhal discharges following any of the preceding

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conditions, hydrastis offers the best possible results.

The dust of summer, the pollenization of plants and the extremes of temperature, especially in the latter part of the summer and the early autumn, are factors in the production and aggravation of nasal catarrh. Here hydrastis should be used both locally and internally, and persisted in for many weeks. Lack of persistence is responsible for adverse opinions regarding the value of many of our medicines. As a rule, good tonics work slowly and without decided or shocking effects, and are to be preferred to those powerful agents which yield meteoric results and leave a damaged mucous tract. Thus, while gonorrhea can be quickly checked in some cases by the more powerful agents, like the silver, lead and zinc salts, a better final result comes from the use of milder agents alone or in conjunction with injections of the former. Among the milder agents hydrastis and aqueous thuja take the lead.

Finally, in that catarrhal state so annoying to many singers and speakers, as well as those who work in dust, in which a small jelly-like mass will accumulate in the laryngeal region during sleep, we have seen nothing to equal in efficiency the internal use of hydrastis persisted in for several weeks.

Much more can be said for this valuable Eclectic standard, but these few items of personal experience with hydrastis are offered for the benefit of those who have overlooked the value of this agent or who have given it up after a brief trial without expected results. Remember that hydrastis, like the "mills of the gods," works slowly, but surely.

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### THE HEART IN PNEUMONIA.

E. E. Cornwall, in the *New York Medical Journal,* thinks it advisable in all cases to give strychnine about the fourth day, even if there are no signs of cardiac insufficiency, for it is reasonable to suppose that the right heart is getting tired. Begin with 1-60 grain three or four times a day. The signs of a failing right ventricle are extension to the right of the area of cardiac dullness and diminution in intensity of the closure sound of the pulmonary valve. When the ventricle begins to dilate the radical pulse softens and increases in rapidity. As it increases cyanosis appears. A grayish pallor in place of cyanosis indicates failure of the vasomotor centre. Functional murmurs are apt to appear. In treatment the patients must be individualized. The strychnine may be increased to 1-30 of a grain every four hours, which is the limit. If further stimulation is required give three minims of the tincture of strophanthus every four hours in addition to the strychnine. If the ventricle still continues to fail resort may be had to additional aids. Caffeine citrate may be given in doses of from two to five grains every four hours. The aromatic spirit of ammonia, one-half to one drachm, may be given every two hours. Digitalin, from 1-100 to 1-50 grain every four hours hypodermatically, acts well in many cases. Alcohol may have to be given to the aged and to those with a history of alcoholism. As a rule its use is not to be endorsed. It must be borne in mind that the heart can be exhausted by overstimulation. The ancient precept that the heart cannot be stimulated too much at the time of the crisis is bad doctrine. Adrenalin, hot rectal irrigations and hypodermoclysis constitute rational treatment in the presence of vasomotor paralysis. Morphine deserves a special word as a stimulant in pneumonia. Its usefulness is very great. But no drug must be used with greater judgment. It is often a life-saving drug. Early in the disease it may be used to allay pain and restlessness, thus conserving cardiac strength, lack of which might discount recovery. Given later in the disease it

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enhances the good effect of the other heart stimulants by quieting nervous reflexes, and particularly by diminishing the irritation of the oxygen hunger and also the need for oxygen, thereby lessening the work of the heart. In doses of from 1-16 to 1-16 of a grain, *pro re nata,* or every four hours, given hypodermatically, it will often tide over a doubtful case. If the bronchi are filling up with mucus and serum atropine may be combined with the morphine, but ordinarily atropine should be avoided, owing to its tendency to produce cerebral disturbances.

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## STUTTERING.

Poock van Baggen, in the *Medical Record,* says that, considering the general constitutional disposition and health of the stutterers we find that most of them are highly sensitive and of feeble nervous condition. An excitable and vivacious temperament is a fertile soil for the evil. The author cannot agree with those who state that stuttering generally is associated with a scrofulous constitution. Save his peculiar nervous temperament the average stutterer does not suffer from an impaired constitution. Many believe that stuttering is an hereditary evil. This statement is true only to a certain degree. It is not the stuttering itself that is hereditary, but rather the particular condition of the temperament which predisposes the patient to the evil. In unfavorable circumstances this predisposition will develop in stuttering. As unfavorable circumstances may be considered: poverty, worry, care, want of discipline, and spoiling of children, and last, but not least, the intercourse with stutterers. The contact with stutterers and imitating them is only too dangerous for the predisposed temperament.

After what has been said about the origin of stuttering it is evident that the first thing to do when treating a stutterer is to give him a rest. So the stutterer is forbidden to speak. Some do not stutter when they speak in a whisper. These are allowed to whisper, but not more than is strictly neecssary. At the same time eexrcises are given for the breathing, vocal, and articulating muscles. These exercises not only aim at the development of the muscles but also tend to favorably influence the nerve fibers associated to the muscle. Therefore the exercises must be carefully chosen in such a manner as to produce a quiet, regular movement of the muscles by means of which all stuttering is excluded. After some days the patient is allowed to speak, in the beginning only in the presence of the teacher and only for a few moments. At a later period when the patient does not stutter the discourses are prolonged. These early conversations, during which stuttering must be carefully avoided, are for the specialist one of the most difficult parts of the cure. They require the exercise of the greatest tact in leading the conversation in such a manner as to prevent the patient from stuttering. When the latter has spoken fluently for some days with his teacher without any stuttering he is allowed to converse a few moments with his family and friends. When we have succeeded so far we generally notice a rapid progress. The patient regains his self-confidence and the constant apprehension associated with his speech disappears; this has a favorable influence on the entire nervous system. When the cure is completed the patient must remain under the control of the specialist for some time, while also continuing the exercises with increasingly longer intervals. If there are adherent symptoms the exercises for the breathing, vocal, and articulating muscles must be combined with slow, regular movements of the limbs. Those voluntary movements suppress the involuntary convulsions.

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## LOBELIA.

Finley Ellingwood, in the *Eclectic Medical Journal,* states that the most profound influence of lobelia is probably its stimulating influence. This makes it a magnificent remedy with which to overcome asphyxia—unconsciousness—and in some cases coma. It is being used in chloroform asphyxia, and it is found to be by far the best agent yet used to quickly restore all the conditions involved. Acting, as it does, immediately upon the respiration and upon the circulatory function, it thus acts upon the two conditions which are directly influenced by the anesthetic, and so actively antagonistic is it to inactivity of these functions that the restoration is immediate and normal, rational and entirely satisfactory. Its use, although limited in this field, already covers several hundred cases, with very few failures.

In asthmatic bronchitis, especially in chronic cases, because of its antispasmodic effect, and, because of its influence upon the respiratory function, again the results are almost immediate and in most cases curative, if the condition is not due to or complicated with serious heart disorder. This complication prevents the full action of the remedy, and full satisfactory results will not obtain.

In acute spasmodic asthma, uncomplicated, no failures are yet reported. Every case has responded to the remedy. Furthermore, the patient has a renewed vitality afterward, and feels as if all the vital forces were taking on a renewed condition of health.

Taking into consideration the statements previously made of the properties of this remedy, its action in tetanus and in puerperal eclampsia is at once explained. In both these conditions we have toxemia first; secondarily, spasm; third, capillary stagnation and progressive heart weakness. Each of these conditions is as directly, positively and as fully met with lobelia as would be possible with any other remedy known, or any combination of remedies, except as to the toxemia alone. While its influence is active in this, it might not always be sufficiently active, and my suggestion would be in these cases to administer either eight or ten drops of carbolic acid directly, diluted with twice its bulk of water, or to administer half a drachm of echinacea, both hypodermically, in conjunction with the lobelia. By so doing it would be at once observed that the toxicity is as fully met as the other conditions, which are sufficiently antagonized by the lobelia, given in sufficiently large doses and repeated once or twice if the first injections do not produce the results. He has narrated some startling cases in proof of his assertion, and although the author has not been able to confirm his opinions, he has great faith in them.

The use of lobelia in angina pectoris is confirmed by quite a number of physicians, but it was used for this purpose before by the mouth very often, and was so advised. Its hypodermic use is more prompt and devoid of nausea and more permanent. The remedy has been used very satisfactorily in severe cases of puerperal eclampsia. In some cases it controlled post-partum hemorrhage.

A very important use of this remedy has been made by Dr. Collyer, of Elgin, Neb., in spinal meningitis. He treated five cases, giving ten drops hypodermically every hour, all of which recovered. In four cases he was the only physician. There was one case that resulted in paraplegia.

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## INTERNATIONAL LIST OF CAUSE OF DEATH.

### Census Bureau will Issue Manual Based on Second Decennial Revision.

Census Director Durand will submit in the near future to Secretary Nagel of the Department of Commerce and Labor the manual of the International

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List of Causes of Death, based on the second decennial revision by the International Commission, which met in Paris in 1909. In his letter of transmittal the Director states that it contains many additional terms not found in the original translation of the report of that commission, and will be of special service to American registration offices whose returns supply the material upon which the mortality statistics published by the Bureau of the Census are based. It was prepared under the direction of Dr. Cressy L. Wilbur, chief statistician for vital statistics of this Bureau.

**Remarkable Progress of Classification.**

In the introduction of the manual it is stated that the progress of what is known as the International Classification of Diseases and Causes of Death it is most remarkable. It can be explained only by the fact that there was a widely recognized need for national and international uniformity of classification, and that the system proposed met fairly well the demands of registration offices and of the users of mortality statistics and proved capable of progressive development as those demands changed with the advance of medical knowledge.

As late as 1893 no two countries in the world employed precisely the same forms and methods for the statistical classification of causes of death, the compilation of which is universally regarded as of the utmost importance for the advancement of sanitary science and practice. This lack of uniformity rendered the statistical results of such classification incomparable, and it was imperative that an effort be made to remedy this defect.

The past eighteen years have seen the successful accomplishment of this task, at least to a degree that warrants the most sanguine hopes of ultimate success and of the early approach of the time when all nations shall be in agreement in this respect.

The measure of this success may be inferred from the large number of countries represented at the sessions of the International Commission in 1900 and 1909, as given in the official reports of the proceedings, although all countries that employ the classification were not represented by delegates in 1909. In a paper before the Fourteenth International Congress of Hygiene and Demography, held at Berlin in 1907, Dr. Bertillon estimated that the system was in effect for over 212 millions of population. This estimate was a very conservative one, the United States being credited with only the population, (33.1) millions, shown for the registration area in 1904. Since the meeting of 1909 the very important accession of Great Britain has been received.

**The Countries Co-operating.**

Many countries, among them the United States, that have expressed their cordial approval of the International List and have adopted it for practical use so far as material is available for the statistical compilation of causes of death, do not enforce the complete registration of deaths throughout their entire territory. This is not the case, however, in the British possessions, for as an almost invariable rule there is thorough registration of vital statistics wherever the British flag flies. The addition of the British Empire is thus a most important one.

All the English-speaking and Spanish-speaking countries of the world are now united in the adoption of the International List. The entire Western Hemisphere, including North, Central and South America; Australia and New Zealand; China, Japan and British India in Asia; Egypt, Algeria and South Africa in Africa; and many countries of Europe are now, or soon will be, represented among those thus seeking international uniformity. Progress during the present decade should be even more gratifying, and by the time of the

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Third Decennial Revision, which is to be made in 1919, it may be hoped that all countries will join in the movement.

The manual states that the International List of Causes of Death makes no pretension of being a proper nomenclature of diseases or of including a scientific classification of diseases. It is only a practical working list whereby statistical compilers can assign medical terms reported by physicians as causes of death to certain more or less definite titles representing individual diseases or groups of diseases of similar character. Statistics of causes of death are vitiated to a considerable extent, and sometimes to a very large extent, by the fact that many deaths are reported under what the Committee on Nomenclature of the American Medical Association very graphically calls certain blind returns. How applicable this phrase is can be appreciated most fully by those who have puzzled over returns as received in registration offices, and an inspection of the many unsatisfactory and indefinite causes included in the manual will make it clear that reform is necessary in order to place our statistics of causes of death upon a satisfactory basis.

**Importance of Exact Statements.**

Satisfactory statements of causes of death can be obtained only by means of a high degree of co-operation between members of the medical profession and the registration authorities. It is desirable that physicians appreciate the importance of exact statements of causes of death and realize, by means of study of the statistical results, how certain forms of reports may lead to misunderstanding and inaccuracy. An essential requirement is that the blanks employed for the statement of causes of death be uniform, as otherwise specific instructions cannot readily be given. A very satisfactory result of the general adoption of the United States standard Certificate of Death, as recommended by the American Public Health Association and approved by the Bureau of the Census, is that uniform instructions can be employed for a very large proportion of the registration area.

In order to familiarize physicians with the general statement of the International List of Causes of Death, a vest-pocket booklet was prepared and distributed directly by the Census Bureau each year to all physicians of the United States as well as to many thousands of local registrars through their state registration offices.

**History of Nosology.**

Nosology, or the scientific classification of diseases, was cultivated with fervor a hundred years ago, and was believed to be a necessary part of the knowledge required for the practical treatment of disease. The system devised by Cullen in his "First Lines of the Practice of Physic," came to be the predominant one, although many other systems were presented, among them those of Sauvages, Linnaeus, Vogel, Sagar, Macbride, Young and Mason Good. All these systems have vanished; the subject is almost entirely neglected at the present day, but its influence may be traced in the forms of statistical lists in present use. Dr. William Farr found the Cullenian system in general use in the public services at the time of the establishment of the modern system of registration of deaths in England. It had not, however, been revised to meet the demand of the advances of medical science and was not suited to statistical purposes. One of Dr. Farr's first duties therefore, was to prepare a "Statistical Nosology," which had a marked effect upon subsequent classifications, including that of the second Revision of the International List.

As a result of his practical experience with this system Dr. Farr was selected, together with Dr. Marc d'Espine of Geneva, by the First Statistical Congress, Brussels, 1853, to prepare a report upon a classification that might be used

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in all countries for the statistics of causes of death. The resolution to this effect was introduced by Dr. Achille Gullard, a distinguished botanist and statistician, creator of the word "demography," and maternal grandfather of Dr. Jacques Bertillon, to whose efforts the present success of the International List is chiefly due.

This was the beginning of the present International List. The classification was adopted in Paris in 1855, in Vienna in 1857, and was translated into six languages. Again revised at Paris in 1864, 1874, 1880 and 1886, the final form was substantially that which was recommended by the International Statistical Institute, the successor of the old Statistical Congress at Chicago in 1893, and which, after the First Decennial Revision of 1900 and the Second Decennial Revision of 1909, is now the International List in force in a large number of countries for the decade beginning January 1, 1910, and ending December 31, 1919.

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## TREATMENT OF DYSPEPSIA.

Allen B. Fearnley, in the *Canadian Practitioner and Review,* says that in the treatment of dyspepsia there are two indications common to both varieties—(a) attention to the teeth where necessary, and (b) correction of constipation. Apart from this the treatment of each variety is distinct.

General treatment consists of rest in bed for a few days in aggravated cases, and, where possible, in freedom from mental worry, overwork (especially where associated with hurried mastication), and removal from uncongenial surroundings.

In the hypertonic form hot baths and Turkish baths do good in promoting excretion from the skin, since it is probable that the condition is associated with some kind of auto-intoxication by absorption from the intestine. Vigorous exercise is also indicated in these cases for the same reason.

In the atonic type, abdominal massage and graduated exercises, such as are used in ordinary chlorosis, are useful.

### Diet.

In the causation of functional dyspepsia, diet probably has much less to do than would appear at first sight, with a few exceptions. For instance, it is probable that excessive meat-eating, especially when combined with a free consumption of alcohol, and when associated with lack of sufficient exercise, predisposes to the hypertonic form and to the high arterial tension associated with it, while common salt probably assists in the production of the acid in the gastric juice, and condiments—mustard, etc.—stimulate its excessive secretion. Therefore in the dietetic treatment of dyspepsia, where there is no actual gastritis present, the indications are few—limitation of meat and alcohol in hypertonic cases, with substitution of boiled meat for roast and exclusion of salt and condiments, and in atonic cases a "dry" diet with exclusion of green vegetables, which aggravate flatulence and addition of alcohol daily to one of the meals. By a "dry" diet is meant avoidance of "slops," which again tend to increase flatulence, and the substitution of dried bread or hard dry toast for ordinary soft bread.

### Drugs.

The first indication is the treatment of the constipation, and for this the best aperient in all cases to begin with is calomel. In hypertonic cases associated with high-tension pulse, its use may be continued for a week in fractional doses (gr. 1-6-1-4) every night, assisted by dram doses of sodium sulphate in half a pint of water every morning. It is a detail of some importance to withhold natural mineral waters in these cases, inasmuch as they contain considerable quantities of sodium chloride, and are

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therefore indicated in the atonic form, though here calomel should not be continued, being replaced by some such drug as cascara.

Coming to drugs which are intended to act directly upon the stomach, the important point is that they must be administered after food; if they are to modify the course of digestion they must be given during digestion. Administration of alkalies before meals, with or without the bitter infusions, is good, but simply from the point of view of lavage; and is therefore equally good in either variety, and to be most effective must be given in half a pint of water.

**Indications for Alkalies.**

In the hypertonic cases, then, the obvious cry is for alkalies, the best being sod. bicarb. and bismuth carbonate in combination, and given in large doses. Probably it is useless to give less than 20 gr. of the bismuth salt as a dose, or, if the fluid form is used, the B.P. liq. bismuth et ammon. cit.—using 2 drachms as a minimum dose—with either a sedative such as HCN may be combined. Bismuth is also administered in the form of lozenges given where the pain comes on. These probably act mechanically to a certain extent at least, causing an increased flow of alkaline saliva, since the amount of bismuth in them is too small to have much effect, and also the pain may be to some extent relieved by sucking any hard substance, such as a pebble. If there is any gouty tendency, guaiacol may be separately administered in cachets. ✤ ✤ ✤

## SCARLET-RED IN POWDER FORM.

Scarlet-red, the fat dye, is used extensively in the form of an 8-per-cent ointment to promote growth of epithelium on raw surfaces. Pavia, in *Therap. d. Gegenwart,* states that in many cases an ointment is unsuitable; hence the dye may be applied with an insufflator in the following form:

Scarlet Red Medicinal.....1.0 Gm.
Acidi Borici.....9.0 Gm.

The wound is first carefully dried with cotton, then a thin layer of the powder is applied, finally the cavity is loosely packed with gauze. The powder is applied first every day, then every second, third or fourth day until the wound is closed. The results have been better than with the ointment.

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## POISON OAK.

For the treatment of this, the most painful and annoying of all infectious skin diseases, acquired at this particular season of the year on account of its association with the muskadine, scuppermong grapes, and other fruits, we have had made through the largest and most trustworthy hospital in the States a series of experiments with Tyree's Antiseptic Powder, a preparation hitherto but little know in the treatment of this disease. The report reads as follows:

"The rapidity with which these cases responded to Tyree's Antiseptic Powder was wonderful. We applied it locally as a lotion of a teaspoonful of the powder, dissolved in a pint of water, and also for dusting the inflamed surface, the powder diluted one in ten with powdered talcum, the itching and swelling subsided within 24 hours, and a cure was effected by the fourth day."

Our booklet and a sample of Tyree's Powder sent free. Sold by all druggists at twenty-five cents.

J. S. Tyree, Chemist,
Washington, D. C.

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## A TISSUE NUTRIENT FOR THE SUMMER.

Oft times during the summer, the physician is put to his very wit's end to find a tissue nutrient for his tubercular and debilitated patients; one that will agree with them during the hottest weather. Cord. Ext. Ol. Morrhuae Comp. (Hagee) by reason of its palatability and the ease with which it is assimilated, is the ideal agent of this character not alone in the summer but at all other seasons.

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# THE DOCTOR HIMSELF.

## MOLIERE AND MEDICINE.

*THE HOSPITAL* (London), refers to the many explanations which have been given of Moliere's hatred for medicine. Suffering as he did from an affection of the heart, it may be that he hated the faculty because of its powerlessness to give him relief. In any case his aversion increased after assisting at the death of Gassendi, who succumbed to the effects of thirteen successive bleedings. It is also said that domestic misfortune was the origin of his dislike of doctors. Whatever be the cause, his antipathy for the medical profession was prodigious and unjustified, for even granting that medicine at his time was often hand in glove with sorcery, and allowing that charlatans often obtained good results at the expense of legitimate practitioners, it is nevertheless true that among the ranks of the latter were to be found many who accomplished great things in the matter of medical progress. It was at this period that chemistry, having rid herself of occultism, was for the first time taught in public, that Bartholin discovered new glands and renewed our knowledge of the blood, that Malpighi prosecuted his researches into all manner of things, that Leuwenhoeck recognized the blood corpuscles, and that Charas gave himself up to dangerous experiments while searching for a remedy against the bite of vipers. All this scientific endeavor, serious and useful as it was, Moliere lost sight of, and his error has brought about a large damage to the popularity of medicine, for his types of charlatans have become immortal, and it has needed the passage of two hundred years before it became possible to talk to doctors on the stage in language other than that employed by M. Purgon.

## THE DOCTOR.

Editorial from the Escanaba, Mich., *Journal.*

Some person intimated to the editor of *The Journal* the other day that he thought we had a grouch against the members of the medical profession. We can't imagine why any person should have such an erroneous idea.

Who was it that helped us into the world, gave us the first hearty slap on the back to start the breath of life, looked into a red, puckered up face in which no one but a mother and a doctor could see any trace of beauty and future greatness, and declared that we were the "finest ever" and was destined to become governor, president, or, possibly, an editor some day?

It was the doctor.

Who was it that was called in at all hours of the day, and who was disturbed and broken of his rest at all hours of the night to respond to the anxious "hurry" call of a fond mother, who perhaps imagined she saw the cold, clammy death sweat upon our infantile brow, and who had to smile outwardly while he raved and cussed inwardly as he assured that fond and anxious mother that "it was nothing but colic—he's eaten too much?"

It was the faithful and long-suffering doctor.

Who was it that prescribed for us for measles, whooping-cough, mumps, stomach aches and such other incidents of childhod, and who was it that came on the double-quick in response to that hysterical maternal call, and who was it that still smiled outwardly, but damned inwardly, when by his knowledge gained by long experience he discovered that the boyish efforts to turn a heaving stomach inside out was caused by the first effort to "be a man" by surreptitiously smoking the hired man's dirty old pipe?

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It was that ever-faithful, always kind, old doctor.

Who is it that is still helping to smooth out the aches and pains, by prescribing the "real stuff" when we really are sick, and a few bread pills or some pleasant, harmless "dope" when we are imagining that the last trump is about to sound for us?

It is the doctor.

Who is it that has saved our life at the several times when our good wife has presented us with new editions of the "old man," and who was it that also relieved our fears as we looked upon those miniature editions, and who smoothed away the oft-expressed doubts as to whether that red-faced, wiggling, twisting, squalling, sleeping bit of humanity could ever possibly resemble a normal human being?

It was the doctor.

Who was it that said, "I told you so," after those same editions have developed into healthy, normal children with an average amount of good looks and intelligence?

It was the doctor.

Who was it expressed the first words of sympathy when the hand of Him that had given reached into the home and took therefrom one of those dearly beloved and very precious bits of infantile humanity?

It was the doctor.

Who is it that, having helped us into the world is now busy helping us through the world, and some day will help us out of the world by making as easy and painless as possible the separation of the soul from the body; and who will be the first one to sympathize with the weeping relatives, and then go out among the living to speak kind words and tell his fellow men about the good things he found in our life that, perhaps, the world didn't know?

It will be the doctor.

God bless the doctor! Banish the thought that we have any grouch against him. The doctor is human, and, perhaps, has his faults; but, after all, knowing the faults, failings and sins of humanity as intimately as he does, isn't it remarkable that he holds his faith in mankind and goes about all his days doing good? There is the odd doctor who thinks more of the almighty dollar than he does of the higher mission of his profession, but, thank God, this kind is surprisingly scarce.

No one but God Himself should ever pass judgment upon the doctor, for He, alone, knows all about the great, sympathetic heart that beats in his breast, and that perhaps, sometimes is hidden behind a forced gruffness.

Again we say, God bless the doctor! There is no grouch here.



## FREE COMPETITION IN MEDICINE.

From "Horae Subsecivae: Locke and Sydenham," etc. By John Brown, M. D., Edinburgh, 1858.

I have long thought that it was nonsense and worse, the avowed and universal exception of the craft of healing from the action of Adam Smith's law of free competition, introducing legislative enactment and license into the public relations of medicine, thus constituting a virtual monopoly. I may be permitted to express this in an extract from a Review of Professor Syme and Dr. Burt's Letters to Lord Palmerton, on Medical Reform.[1]

"And now for a closing word for ourselves. Mr. Syme's scheme is, as we have fully stated, the best, the simplest, and the least objectionable if it be wise and necessary for the State to do anything in the matter. There is much in this *if;* and after consideration of this difficult and little understood subject, we are inclined to hold that Adam Smith's law of free competition is absolute, and applies to the doctors of the community as well as to its shoemakers. In a letter to Dr. Cullen, published for the first time by Dr. John Thomson, in his life of

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that great physician, written before the publication of *The Wealth of Nations*. he, with excellent humor, argument and sense, asserts that human nature may be allowed safely, and with advantage to choose its own doctor, as it does its own wife or tailor. We recommend this sagacious letter to the serious attention of all concerned. We give some specimens; its date is 1774: 'When a man has learned his lesson well, it surely can be of little importance where, or from whom he has learnt it. In the Medical College of Edinburgh, in particular, the salaries of the professors are insignificant, and their monopoly of degrees is broken in upon all by all other universities, foreign and domestic. I require no other explication of its present acknowledged superiority over every other society of the same kind in Europe. A degree can pretend to give security for nothing but the science of the graduate, and even for that it can give but very slender security. For his good sense and discretion, qualities not discoverable by an academical examination, it can give no security at all. Had the Universities of Oxford and Cambridge been able to maintain themselves in the exclusive privilege of graduating all the doctors who could practice in England, the price of feeling a pulse might have by this time risen from two and three guineas' (would that 'Time would run back and fetch that age of gold'!) 'the price which it has now happily arrived at, to double or triple that sum. The great success of quackery in England has been altogether owing to the real quackery of the regular physicians. Our regular physicians in Scotland have little quackery and no quack, accordingly, has ever made his fortune among us.' Dr. Thomson did not find in Dr. Cullen's papers any direct reply to the arguments of his friend; but in a Latin discourse pronounced two years afterwards, at the graduation, he took occasion to state in what respects the principles of free competition, though applicable to mechanical trades, to, in his opinion, not extend to the exercise of the profession of medicine. His argument is conducted temperately, and by no means confidently. He remarks, with sagacity and candor, 'that there are some who doubt whether it is for the interest of society, or in any way proper, to make laws or regulations for preventing unskilled or uneducated persons from engaging in the practice of medicine and it is very obvious, that neither in this nor in most other countries are effectual measures adopted for this purpose."

His argument is the common, and we think unfound one, that mankind can judge of its carpenter, but not of its doctor; and that in the one case, life is at stake, and not in the other, a fallacy easily exposed—a floor may fall in and kill dozens, from bad joinery, as well as a man die from mala praxis. We believe that the same common sense regulates, or at least may regulate, the choice of your family doctor, as it does the choice of your architect, engineer, or teacher.

"If a man choose his architect or engineer from his own personal knowledge of their respective arts and sciences, he must either choose himself, and forget his stair, or make very sure of choosing the wrong man; in this, as in so many things, we depend on testimony and general evidence of capacity and worth.

"In a word, our petition to Parliament is, Make a clean sweep; remove every legislative enactment regarding the practice of medicine; leave it as free, as unprotected, as unlicensed, as baking or knife-grinding; let our Colleges of Physicians and Surgeons, Faculties, and Worshipful Companies, make what terms they like for those who choose to enter them; let the Horse Guards, let the Customs, let the Poor Law Boards, let the Cunard Company, demand and exact any qualification they choose for the medical men they employ, and pay, just as Lord

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Breadalbane may, if he like, require red hair and Swedenborgism, in his Lordship's surgeon to his slate quarries at Easdale. Give the principle its full swing, and, by so doing, be assured we would lose some our worst Quacks; but we would not lose our Alisons, our Symes, our Christifons, Begbies, and Kilgours, or our Brodies, Lathams, Brights, Watsons and Clarks; and we would, we are persuaded, have more of the rough and readies, as Dr. Burt calls them. Gideon Gray woud have an easier mind and more to feed himself and his horse on, and his life would be more largely insured for his wife and children. And if from the corporate bodies, who are trying to live after they are dead, the ancient cry of compensation rises up wild and shrill, give the Belisarii their pence, and let them be contemptible and content." But let there be no interference, under the name of qualification or license, with free trade in medical knowledge and skill. There is in the body politic, as in the body natural, a self-regulating power to which we ought to take heed, and trust its instincts, and not our own contrivances. This holds in religion, in public morals, in education; and we will never prosper as we might till we take the advice Henry Taylor relates that an old lady of rank gave to her anxious daughter-in-law, when asked by her what she would advise as to the education of children: "I would advise, my dear, a little wholesome neglect."

[1]Edinburgh Medical Journal, December, 1857.

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## PRACTICING MEDICINE IN SIAM.

To a physician who inquired as to openings in Siam, Vice Consul General Carl C. Hansen, of Bangkok, who formerly practiced medicine in the United States, replies that Siam does not appear to afford good opportunities for medical men in private practice, as specialists or otherwise. The total population of Bangkok amounts to 540,679, including 1,564 Europeans. The American Presbyterian mission has 12 medical men stationed in Siam, and about 20 other foreign physicians are engaged in private practice or Government employ, and, besides these, there are many locally educated native practitioners and other nonqualified physicians. As to State requirements, up to the present there have been no restrictions whatever to the practice of medicine by anybody, whether qualified or not.

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## "THERE AIN'T NO MIDDLE ONE."

The *Saturday Evening Post* relates that in his early practice Dr. D. B. St. John Roosa, the eminent New York specialist, one day received a letter from a man living in a remote part of Connecticut. The writer explained that he was afflicted with growing deafness, and that a summer visitor to the neighborhood had suggested his going to New York and consulting Dr. Roosa. After describing the symptoms, the man ended by asking what was the probable nature of his trouble. Dr. Roosa suspected from the tone of the communication that the case was not for him, but he, of course, replied, advising the man to consult a local physician, and adding in answer to his direct inquiry: "From what you say, I should presume that your difficulty arises from a diseased condition of the middle ear."

Two days later the doctor found this among his mail:

Dear Sir: Yours received and contents noted. What do you take me for —a ring-streaked willipus-wallipus? You talk about my middle ear; how many ears do you think I've got—three? or five? My ears may be pretty long, and I guess they are, or I wouldn't be writing to no New York doctor for advice, but I'd have you to understand that I've got just two of them, and no more, like other folks, so there ain't no middle one. Don't get fresh.

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### BUSINESS BETWEEN DOCTORS.

*The Hospital* (London) advises that business transactions between friends or relations should be "tied up" by legal hands to meet every contingency, at least as carefully and precisely as those between strangers. This may seem superfluous advice; but the neglect of such obvious precautions has often been the cause of avoidable friction between medical partners, and even of open strife and disastrous litigation. Unfortunately, disagreements and jealousies are only too common amongst medical men who may have entered into partnership under the happiest circumstances. Often the element of discord is introduced by the wives and not by the practitioners themselves. And even in the best conducted practices embarrassing situations will arise between partners through the capricious or arbitrary behavior of patients. Sometimes the hypersensitiveness of one member of a firm causes ill-feeling through the imputation of "poaching patients" or "shirking dirty work" on the part of another member. Perhaps the greatest asset to a firm of three or more practitioners is the possession of tact, good humor, and common sense by the senior partner.

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### ALLEGED DECLINE OF THE PHYSICIAN.

We hear a great deal these days, says the *Medical Standard,* from various sources, both lay and professional, about the decline in the professional status of the physician, especially of the family physician; and numerous are the explanations offered for the condition of affairs. By lay writers the fault is laid with the medical fraternity; by medical writers it is attributed to the laity. We are told that the modern medical man fails to keep step with the spirit of the times; that there is too much specialism; that there is undue commercialism; that fees are too high; and so on, ad nauseam. On the other hand, we are informed that the public is running after strange gods; that it neither knows, nor cares to know, anything concerning its own interests; that it is prostituted to patent medicines; and so on, again, ad nauseam.

For ourselves, we do not see that any such mutual recriminations are called for by the state of the case. There is, so far as we can see, nothing in the situation which is not fully accounted for by natural processes. The history of medicine, in this respect, is similar to that of religion. Time was when the minister held, in the community and the home, an esteem which almost amounted to veneration. His lightest word, in all matters of morals and conduct, was law. His very person was sacred. One did not speak of "a preacher," but "the preacher." So was it with the doctor in former times. He possessed the oracles of the physical law. He was the priest of a system of prevailing mysteries to which the layman had no initiation, which he regarded with corresponding awe, and its minister with reverence.

Mais nous avons change tout cela. The profession and practice of medicine is nowadays regarded merely as a division, for convenience sake, of the world's work; the physician as nothing more than a man among men, specially delegated to that branch of work by the public, by reason of his choice of occupation and his special training. The public specifies that training, and dictates the conditions under which he shall be permitted to follow his calling. The general average of intelligence and knowledge among the laity is considerably higher than it formerly was; hence the doctor, like the preacher, is no longer the oracle that he used to be, nor, to be frank, is he needed as much as he used to be.

That is really all there is to the much-talked-of decline of the doctor's prestige. It does not imply that he has really lost any real prestige or dignity. But he has been divested of the impressive cloak of superstition that used to envelop

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him, and now walks the streets, literally and figuratively, in the garb of an ordinary man of affairs. He is no longer worshipped as a fetish, but consulted as an expert. Who shall say that this latter status is not characterized by more genuine dignity and honor than the former?

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### SILLY OPTIMISM.

While we heartily approve and encourage a spirit of sane and wholesome optimism, we desire to register our feeling of something akin to nausea at the over-done affectation of optimism, of the cheerful-idiot type, that characterizes so much of our present-day literature, especially the periodical literature of the day. It is forced, artificial sentiment, having no place or value in real life, and does not express the emotions common to most human hearts. It is of a piece with the hysterical exaltation of religious revival, which has about as much relation to genuine faith and sober morality as a firework has to the sun.

Real optimism is faith, not fanaticism. It is the steady courage of a clear head, not the razzle-dazzle Dutch courage induced by constant mental "nipping" at a stimulant. The sun *isn't* always shining; often the day is gray and sombre; but the true optimist sustains himself with the knowledge that even the sombre grayness bears witness to the sun, and every once in a while he gets a glimpse of what the sun really is and can do. The rockets that a man sets off himself —these can be kept going at high speed and brilliancy, while they last; but when he happens to be out of rockets, what about his optimism? The prevalent type of optimism is about as sensible as the old habit of the ostrich of hiding its head in the sand.

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### CONTRACT PRACTICE.

In Austria and Germany a bitter fight is being waged between the medical profession and the government over the latter's paternalistic scheme for general insurance against sickness, which provides that every person earning less than a certain sum a year shall be required to become a member of the a Krankenkassa, or "sick club," in which the medical staff will be expected to look after the health of the members at a rate of compensation approximating fifty cents a year per head. This is the extreme limit of contract practice, aggravated by the pestiferous interference of the state but it represents in its economic essence the logical and inevitable tendency of all forms of contract practice, and should serve as an object lesson to the medical profession in this country.

There is, however, a side to this matter which is not usually exploited in its treatment by the medical press. There is an old proverb of most honorable origin that "he that liveth by the sword shall perish by the sword," and it is significant of its application in this case that the medical fraternity which has most frequently and most extensively invoked state paternalism, and under its protecting shadow has pushed its own organized schemes to the limit, is now suffering from an excess of government meddling, manifested in the very form that medical politics has taught it. In Germany and Austria, as everyone knows, the medical profession has organized and legislated itself and its public to death, and in so doing it has raised a spirit which it is now unable to quell, and which has finally turned the tables upon itself.

This, in our judgment, is the real lesson of the present deplorable conditions in Europe for the profession of this country to take to heart for, if we mistake not, there is a mischievous tendency among our own fraternity to rush into the same extremes of organization and legislation, which are bound, in the long run, to react in similar examples of counter-organization on the part of the public and reversions of the paternalistic functions of the state.

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# REFRACTION.

## A NEW TERM IN SKIASCOPY.

By J. Herman Claiborne, M. D., in *Opthalmology.*

MY object is very briefly and simply to call attention to a sign in retinoscopy or skiascopy which, as far as I am aware, has not been hitherto described. I refer to the behavior of the shadow in spherical errors. Of course, the observation is best made when the pupil is dilated ad maximum. I believe it is customary with the majority, if not all observers, who perform skiascopy to rotate the mirror alternately upon a vertical and then upon a horizontal axis, or vice versa. When it is rotated upon the vertical axis, of course the character of the shadow in the horizontal meridian is determined—when upon the horizontal axis, the character of the shadow in the vertical meridian. When the astigmatism is oblique, the shadow will be oblique, upon whatever axis the mirror is rotated. This peculiarity of the oblique shadow is caused by the shape of the shadow made upon the retina, and by no other cause—as has been clearly shown by Hartridge, in his work on refraction over twenty years ago, by others, and by myself in my textbook entitled "The Theory and Practice of the Ophthalmoscope."

The sign to which I refer and which is characteristic of spherical errors is to be seen only when the mirror is turned in a circle, or rotated upon an antero-posterior axis. It is my custom, and has been for years, to use the concave mirror, and to employ skiascopy for the purpose of qualitative, approximately quantitative estimates of refraction and the proving of the functional examination. When the mirror is rotated on the antero-posterior axis, either in spherical myopia or hypermetropia the shadow moves in the circle and ultimately always in the same direction with the movement of the mirror. It resembles more than anything that I know of, the turning of a wheel upon an axle, or a revolving circle. The shadow chases itself around the pupil. In hypermetropia, speaking from the standpoint of the concave mirror, as the circular movement commences, the shadow is observed to creep from the opposite side of the pupil and chase itself in a circle from left to right, when the mirror is moved from right to left; or, from right to left, when the mirror is moved from left to right. The movement in this case is against the movement of the mirror, and yet each shadow chases the other in the same direction. See figure 1.

In the case of myopia, the shadow moves, of course, with the movement of the mirror, and starts from the quadrant in which the circular movement of the mirror starts, and chases itself around the pupil as in hypermetropia. The movement in both cases, therefore, is purely circular, and the shadow appears to move always in the same direction, though in the two cases it starts from opposite directions. See figure 4. A little practise will enable one in a few moments to tell the existence or non-existence of a spherical error. Of course, the degree of the error is indicated by signs which are well known to all those conversant with this method—a gray slow shadow indicating high error, a black rapid shadow low error.

In the case of astigmatism the appearance described is not found. In short, the shadow does not chase itself around the pupil, but halts at the meridian of division. It is well to indicate the behavior of the shadow in each form of the astigmatism, and to this end attention is called to the schematic drawings. Figure 2 indicates the behavior of the shadow in

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simple far-sighted astigmatism. The movement, of course, is against the movement of the mirror, and as the meridian of the division is reached, the shadow ceases, and recommences on the opposite side. In figure 5 the behavior of the shadow is indicated in simple myopic astigmatism. The shadow moves from below upward until the meridian of the division is met and reappears above. Figure 3 represents the shadow in compound far-sighted astigmatism with the rule, the long arrow indicates the slow shadow in the horizontal meridian which has the greater refractive error, and the short arrow that in the meridian of less error. Figure 6 represents the shadow in compound myopia astigmatism with the rule; the long arrow indicates the shadow in the vertical meridian which has the greater refractive error, and the short arrow the meridian of less error.

It is somewhat difficult to determine the behavior of the shadow in mixed astigmatism; if the mirror be rotated very slowly on a circle, the shadow will be seen to behave in its respective meridians, exactly as in simple far-sighted and simple near-sighted astigmatism. In short, the shadow can be seen to move against the movement of the mirror in the horizontal meridian, and with the movement of the mirror in the vertical meridian. If, however, the mirror be rotated very rapidly, the shadow appears to move against the movement of the mirror; that is to say, the general impression is produced upon the observer's eye that the shadow is moving rapidly against the movement of the mirror. I have observed this in many cases of mixed astigmatism. The behavior of the shadow in each case was the same.

The behavior of the shadow, however, in astigmatism in general has only scientific and academic interest, since as soon as the characteristic shadow of spherical error is seen not to be present, the regular rotation of the mirror in the vertical and horizontal axis may be employed and the character of the shadow be determined in the usual way.

For the rapid diagnosis of spherical error or the general diagnosis of astigmatism the rotation of the mirror or the antero-posterior axis is valuable and serviceable.

I repeat: I am not aware that these signs in skiascopy have been heretofore described.

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## THE RETINAL IMAGE IN MIXED ASTIGMATISM.

The *Optical Journal and Review* remarks that it is often found in cases of mixed astigmatism, or in cases of low astigmatism which are made mixed by the action of the accommodation, that the visual acuity is normal or better than normal, and the young optometrist wonders why this is. It is easy to understand how in a simple spherical error the accommodation will make the retinal image a good one and thus give normal vision, but how can we explain the fact that in some cases, where the astigmatism is as high as 1 diopter, there is no apparent falling off in the visual acuity that would make us suspect it. In an eye with mixed astigmatism there are two foci, at one of which each point in the object observed is seen with a distortion in one direction, and another focal point where it is seen with a distortion in the opposite direction, these two directions being the principal meridians of the given astigmatic eye. If the eye is looking at a point of light, one of these focal images will be in the form of a short line, as at A in the diagram, and the other focal point will be a line in the opposite direction, but the retina lies midway between these two points, and there the image of the object will be not line shaped, but round like the point of light, only blurred. Hence the brain centers perceive the object as simply blurred, very much the same as though it were a case of simple spherical error with ac-

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commodative action. Now, seeing is a brain function, and this particular case learns through experience to correctly see objects by their blurred retinal images, and becomes so expert in this, as the result of practice from early childhood, that normal visual acuity, or better, is attained. If such an eye is properly corrected it will be found in the course of a few months that the visual acuity will go still higher, even up to 20/10.

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## PUPILLARY CONDITIONS.

R. M. Lockwood, in the *Optical Journal and Review,* states it is seldom that the contraction of the pupil to light does not take place, but when one does find such a case, the chances are that there is a very serious disease of the nerves present, and the services of the physician are urgently called for. At the same time he can note the width of the pupils, both with the light on them and removed. If the pupillary width is more than usual, the symptoms which brings the party to the optometrist may be due to this cause, and if he insists on having glasses, which should be entirely at his own responsibility, the amber shade is advisable. To test the pupillary reflex for accommodation, hold up some small bright object at a distance of 20 inches or so; have the patient look at this, and then look at something across the rooms just above it or to the side of it. Let him look first at one and then at the other alternating; meantime shift the position of the object of fixation until one eye does all the converging; then note whether the other eye contracts with accommodation, or not. The amount of this contraction is small, but if it does not exist at all, the case again is for the doctor, though an optometrist may be in practice for a very long time without meeting such a case.

### The Test for Opacities.

An opacity of the eye is at once seen when we use of the skiascope as a spot on the red background of the eye. In people no longer young it is not rare for there to be an opacity which may be and usually is a beginning cataract, though there may be other kinds of opacities, as, for instance, a scar on the cornea, for the spots we see with the mirror are not necessarily opaque; they are simply less transparent than the balance of the pupillary area and seem to us to be black. When an opacity of the eye is discovered, the patient should be notified of its existence, but nothing should be said about cataract, as that in the first place is not the business of the optometrist, and, in the second place, the opacity may not be a cataract at all. If the optometrist cares to find out whether the opacity is in the crystalline or in the cornea, he can examine the cornea by throwing a strong light on it from the side through a high power magnifier, and if there is an opacity on the surface, or within the substance of the cornea, it will be clearly seen. If the cornea is clear, it is almost certain that the opacity is in the crystalline lens. Using the skiascope for detecting opacities of the eye is not the practice of skiascopy, but merely the skiascopic mirror is handy for the purpose, just as is the mirror of the ophthalmoscope. In fact, any piece of looking glass with a small hole in it, or the silvering removed from a small portion of its surface, would serve just as well for this test.

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## MORBID EFFECTS OF EYE STRAIN.

Lilla A. Greene, in the *Dietetic and Hygienic Gazette,* points out that the errors of refraction giving rise to morbid functions are of two kinds: muscular errors or insufficiencies and the more strict errors of refraction, such as hypermetropia, myopia and astigmatism. The muscular insufficiencies are concerned with the muscles external to the eye itself, and particularly with the ciliary muscle in the eye, which is used in accommodation. "The generally accepted normal eye is so constructed that parallel rays—and all rays are considered as such that come from a distance

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equal to or greater than six metres—are brought to a focus at the fovea centralis in the retina without any muscular effort or aid." With all near work the ciliary muscles at once come into action and shorten the focus of the lens, bringing the diverging rays from a near object to a point upon the retina. "The lens, namely, grows more convex when a near object is looked at, and flatter when the object recedes. This change is due to the antagonism of the circular 'ligament' in which the lens is suspended, and the 'ciliary muscle.'"

Thus, accommodation is the function of the ciliary muscle and lens which makes it possible to see objects at different distances.

Dr. Frederick A. Cheney, in an article in the Boston Medical and Surgical Journal, writes that among eye-laborers, students, bookkeepers, and sewing-women "the ciliary is probably the hardest worked muscle in the body, even if the eye is normal. If, in addition, this muscle is called upon to correct hypermetropia or astigmatism, it is not surprising that the added strain is often the last straw in breaking down the overworked man or woman. Other muscles of the body have their periods of rest, but this ciliary muscle is under constant strain every moment except when the eyes are closed. At about 50 years of age the lens are less elastic, there is a failure in sharp near vision, so that persons over 55 seldom suffer from eye strain. Nature has brought about some change or loss of function in the ciliary muscle so that people no longer tax it. This is what is known as presbyopia. For those under 55 this strain of the ciliary muscle or insufficient power of accommodation is one factor in causing eye-strain.

Another element involved is hypermetropia or farsightedness, when the refractive power is too low and the parallel rays of light entering such an eye would be brought to a focus behind the retina. Years ago the treatment for hypermetropia was rest, so that the victim had to give up school and consequently a career. In myopia, or nearsightedness, the refractive power is too high, so that the parallel rays are brought to a focus in front of the retina. Mr. Simeon Snell maintains that myopia is the most serious condition as far as vision is concerned. "It has been described as the 'melancholy privilege of the professor,' and 'an accompaniment of intellectual progress.' It is, at any rate, a direct result to a great extent of our civilization. . . Myopia is always a defect; often a disease. It is entirely incurable, but largely preventable. Its progress can be, and often is accelerated by improper use of the eyes, and retarded by judicious interference." A third element which causes eyestrain is astigmatism. This is a defect in which the "refraction varies in the different meridians of the cornea, owing to the irregularity of its curvature, or as a result of an imperfect lens or irregular contraction of the ciliary muscle." It is a lack of symmetry in the curvature of the cornea and to the crystalline lens. "Astigmatism is the chief cause of myopia and of cataract. Astigmatism is unavoidable, but all its effects may be easily avoided."

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## PROMPT RELIEF IN SCIATIC PAIN.

In reporting his experience in the treatment of sciatica, Fred E. Davis, M. D., writes as follows in *Annals of Gynecology*: "I have been giving antikamnia and codeine tablets a thorough trial in the treatment of sciatica and I must say that my success has been phenomenal indeed. I have also induced two other physicians to give them a trial and their success equals or surpasses my own. I meet with many cases of sciatica and before adopting antikamnia and codeine tablets I used a great deal of opium and morphine to relieve the pain. Since then, I have not given either. One of my patients had been confined to bed for three weeks during her last attack of sciatica. I prescribed one antikamnia and codeine tablet every four hours and in forty-eight hours she was up and about and has not felt the pain since."

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# THE SICK ROOM.

## NURSES AND PATIENTS.

*THE TRAINED NURSE* gives some very helpful suggestions both to patients and nurses which are worth while for everybody to remember. "Much is conveyed by manner and a very disagreeable atmosphere may be created without a word being said. I have seen nurses give a bedpan with a disdainful, long-suffering air that made the patient feel like a culprit. If the nurse stopped to think she would realize that this service is just as unpleasant for the patient, and probably more so. There are some patients who demand menial service after they are well able to do for themselves, and no self-respecting nurse will confuse the duties of her profession with those of lady's maid.

### A Disturbing Patient.

A common nuisance is the patient (or plural) who persists in calling "Nurse, nurse" at night, or loudly raps until every one is awake. Suppress this patient—tell her kindly but decisively that there are many others who are disturbed by her noise and talking, and she must be quiet, that a nurse passes through every half hour and it is rarely necessary to call one if she watches and waits a few minutes.

Put the snorers at one end, most distent from the wakeful, nervous patient. I often wish that every nurse and doctor had to spend at least one week in a public ward. Fancy sleeping in a room with twenty people, many snoring, with the air unfit to breathe, a clock loudly ticking and striking the half hour, the frequent rustling entrance of the nurse, often with a light. No one who has not tried it can ever know what the average person endures.

### Talking About Other Sick People.

One of the first things to learn is not to talk about one patient to another.

Two patients in a well-known hospital met in the corridor as they feebly ventured beyond their rooms. One said, "Why! you must be the girl who was so ill and lived on iced-champagne for four days! The nurse told me all about your operation."

The other exclaimed, "And you must be the lady who had a bladder operation and nearly died. The nurse told me all about you."

A doctor who, for business reasons, did not wish it known that she was ill and to have an operation, tacked a notice on the office door, "Away for two weeks," and went to a hospital one hundred miles away, desirous of keeping it as quiet as possible. The next day she learned that one of the nurses had a sister in the small city from which she came.

She knew this sister slightly, and said to the nurse: "By the way, no one knows where I am and I must ask you not to mention it to your sister. This will save me annoyance."

"Oh, I am sorry, but I wrote last night that you were here." The result was that most of her clientele speedily learned where she was and why.

Be human enough not to expect the patient to lie tucked in on all sides all day, with just the proper amount of sheet turned over the counterpane, and the little stand with the Testament stiffly at the head of the bed. Do not be too impatient if the bed becomes a trifle disordered and a few magazines invade the table and encroach on the Testament. After all, it is the patient and not the bed that is most important.

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### A Hint About Bathing.

In bathing, be sure to dry your patients. This would seem superfluous advice, but it is not. In rubbing a back put energy and life into it, for only that takes out the ache. Patients often complain that the nurse moved her hands up and down and smoothed the back without resting it. Of course, a nurse who has been working hard all day and has several backs to rub cannot do a regular massage on each, but five minutes of intelligent wide-awake rubbing does more good than fifteen half-hearted.

If a thing is to be served hot, serve it hot, not tepid; if cold, serve it cold. If medicine is given so many drops in water, teaspoon two hourly, set it on ice instead of giving it tepid and half nauseating.

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## MEDICINES THAT HINDER DIGESTION.

There are many drugs, especially alkaloids and some bitters, which stop the process of digestion to a greater or less degree.

In ordinary doses this influence may be slight, but any drug or preparation that is an irritant to the stomach should be administered shortly after meals so that it may not have a chance to exercise its full irritating effect on an empty stomach.

Even bland, non-irritating tablets, pills and capsules should generally be administered after a meal or at least after a large draught of water, and the tablets should be crushed before swallowing.

Potassium chlorate tablets should not be dissolved in the mouth, as the concentrated saliva, containing this solution when swallowed, is irritant to the stomach and may cause inflammation and even ulceration. Certainly such tablets should never be swallowed into the stomach.

Bromide tablets, salicylic acid or its salts in tablets, tablets containing ammonium chloride, and in fact most tablets, may cause irritation of the part of the mucous membrane on which they dissolve, if swallowed into the empty stomach, and most of the above named tablets should be predissolved, or certainly crushed before taking into the stomach at any time.

Quinine pills or tablets should never be taken on an empty stomach. If in any dose other than a small tonic one, quinine will slow peptic digestion. onsequently, if large doses are administered, it is well to give them between meals, swallowed with a few ounces, more or less, of milk or other simple, easily digestible food.

If a patient does not sleep well, or does not get to sleep readily at night, the possibility of a tonic capsule or pill of quinine, or quinine and strychnine, or strychnine, given after the evening meal, being the cause of it should be considered, and the evening dose omitted.

Many a patient is given hypnotics for insomnia when the omission of the evening tea or coffee will allow normal sleep. It is physiologically wrong to give a hypnotic to a patient who is ill when he is being hyperstimulated by strychnine throughout the afternoon and evening.

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## DIET IN TYPHOID FEVER.

By D. W. Reed, Greeley, Colorado, in *The Medical Review.*

Much has been written on the above subject and still the disease carries off its thousands. It must be that what has been written has not been the best advice, else the mortality rate would be perceptibly lowered.

I have in my book case "authorities" on therapeutics and invariably they advise giving typhoid fever patients fresh milk and plenty of it and some of them recommend that the nurse shall insist on giving the patient sweet milk even if the patient objects to it. My experience with typhoid fever for sixteen years has convinced me that the sweet milk diet is one of the chief causes if not the sole cause of the long continued fever and the high mortality rate.

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Why should a physician of the twentieth century follow the advice of physicians of the middle of the nineteenth century? Does not every physician of to-day know that typhoid fever germ can live and multiply more rapidly in sweet milk than in any other culture medium (except possibly bouillon)? If they multiply rapidly in sweet milk in the dairyman's milk can, will they not multiply even more rapidly in milk in the alimentary canal?

But the objector may say that "the acidity of the gastric juice will so acidulate the milk that it will inhibit germ growth." How much acid is there in the secretion of the stomach of a typhoid fever patient? I have analyzed many stomach fluids and my experience leads me to the conclusion that in typhoid fever, Hcl is either entirely wanting or exceedingly diminished, hence there would be but little if any acid to inhibit the growth of germs.

One of the principal reasons assigned for prescribing sweet milk is that the patient should have a "liquid diet" in order to avoid hemorrhages.

If the gastric juice possesses the rennet ferment even in small amount the casein is very soon coagulated and becomes a tough leathery curd, very unfit for the stomach and intestines of a typhoid fever patient. Probably all who have witnessed an autopsy on a typhoid fever victim have seen large curds from three to six inches in length. I have seen them vomited and the puzzle to me was how such large curds could get up through the œsophagus.

This being so, the argument in favor of a liquid diet falls to the ground.

Then what is a good diet for the victims of typhoid? In other words, what diet will nourish the patient and at the same time inhibit the growth of the *bacillus typhous?*

When I took my course in the bacteriological laboratory at Ann Arbor, Mich., Dr. F. G. Novy taught us to make each test tube culture medium, either neutral or slightly alkaline if we wished to develop millions of the germs. If we were a little careless and innoculated a test tube that was a very little acid, the germs would not grow well. I resolved that if ever I got my "sheep skin" I would remember that fact when I got my first case of typhoid fever, and I have done it.

I give the nurse orders to give nothing but water for a day or two, then when the alimentary canal has been thoroughly cleaned out I request that fruit juice shall be given. The best of all fruit juices is that of black grapes. The tartaric acid of the grape is a very unfavorable medium in which to develop the typhoid fever germ.

Sour apple sauce which has been run through a collander or sieve or cranberry juice may be given for a change.

Good buttermilk if it contains enough of lactic acid will also be very acceptable to the patient and will not afford a favorable medium for the germs. It has also been my custom to acidulate the water that the patient drinks with a drop or two of HCl.

In this manner I attempt to keep the intestinal canal acid in reaction constantly. The fever runs a very low course, is seldom above 102 F. or 103 F. at most and the time is much shortened. many cases terminating in from 8 to 12 days.

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## THE VISITING NURSE.

The *Medical Record* thinks the visiting nurse in the country, and especially in New York, might well say *veni, vidi, vici.* She has come and has come to stay. She has observed how matters stand, and if she has not conquered the diseases and complaints with which she is brought into contact she has at least played an important part in the fight against ill health and in preventive medicine, and she has conquered, or nearly so, the prejudice existing against her and

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her ministrations. To the *American Journal of Nursing* for August, 1911, C. E. A. Winslow, associate professor of biology, College of the City of New York, contributes an article with reference to the visiting nurse from a public health standpoint. The writer thinks that the visiting nurse is the most important figure in the modern movement for the protection of the public health. The visiting nurse is mainly concerned with school inspection, with tuberculosis, and with the reduction of infant mortality. Visiting nursing was inaugurated in Great Britain, but it has attained its highest stage of development in New York City. Miss Waters, in her book on "Visiting Nursing in the United States," published in 1909, mentioned twenty-four cities which at that time employed nurses for school inspection, and its present status is well summed up in the following paragraph, quoted from Gulick and Ayres' "Medical Inspection of Schools": "To sum up the case for the school nurse, she is the teacher of the parents, the pupils, the teachers, and the family in applied practical hygiene. Her work prevents loss of time on the part of the pupils and vastly reduces the number of exclusions for contagious diseases. She cures minor ailments in the school and furnishes efficient aid in emergencies; she gives practical demonstrations in the home of required treatments, often discovering there the source of the trouble, which if undiscovered would render useless the work of the medical inspector in the school. The school nurse is the most efficient link between the school and the home. Her work is immensely important in its direct results and very far-reaching in its indirect influences. Among foreign populations she is a very potent force for Americanization." Perhaps the most important of the duties of the visiting nurse is in the part she plays in the efforts to reduce infant mortality. In this field her services are essential. The keynote of the situation as regards the fight against disease is to educate. The nurse is primarily and above all an educative factor. Disease will exist and flourish so long as ignorance prevails, but disease will wither and its prevalence abate in exact proportion to the increase of knowledge. The role of the nurse, being chiefly educative, is therefore one of the greatest forces for good in modern life. To Miss Wald is due the inception of visiting nursing in this country, and to the same woman is also owing its development on special lines.

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### INFANT FEEDING.

M. Pfaundler, in *Terap. d. Gegenwart,* gives the following simple rule for feeding children from the second to the sixth month: Take an amount of cow's milk corresponding to one-tenth of the weight of the child, add one-hundredth of the weight of carbohydrate and dilute with water to one litre. Divide into five meals and give of each as much as the child will take without urging. Up to the fourth month the carbohydrate employed should be some sugar (cane sugar, milk sugar, maltose, Leibig's soup, etc.) and 2 to 3 per cent oatmeal water, later 3 to 4 per cent oatmeal, wheat or barley gruel. Since it is, however, impossible to tell in advance how a certain food will agree, it is always necessary to control the weight and temperature and to inspect the stool.

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### TO TELL OR NOT TO TELL.

How much a patient ought to know about his own condition is a question which must be left to the discretion of his doctor and relatives; and the former must decide, in conference with the more responsible of the latter, what is wisest. The nature of the disease and the temperament of the patient are the chief factors to be considered, but in chronic infectious complaints the safety of other members of the household has also to be remembered. Thus, in all forms of consumption (tuberculosis) enough must be

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told to secure the patient's co-operation in securing the destruction of the germs which emanate from him. The knowledge may possibly depress him, but the harm done is trivial by comparison with that wrought by the old kindly secrecy, which allowed such patients to sleep with the healthy, eat and drink from utensils, with no precaution for the common safety, speak into folk's faces at close range without fear, expectorate into handkerchiefs, open spittoons and other places, and die without a thought of disinfection—a custom which has exterminated families and made this disease the scourge it is.

With chronic heart disease, a timely warning may enable a wise patient to prolong his days to, or nearly to, the average span; while a judicious secrecy may be almost as beneficial in the case of a nervous, apprehensive patient. For diabetes and chronic kidney mischief the truth must be told, with the assurance that safety and length of days depend mainly upon conformity to rules laid down by the physician in charge.

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### BED-SORES.

Bed-sores are likely to occur in the patient who is aged, paralyzed, debilitated, or suffering from fever, particularly continued fever, like typhoid; in short, their formation is liable in all cases where the blood is vitiated, or its circulation retarded, and the constitutional powers reduced; pressure, uncleanliness, and moisture hasten their appearance.

To prevent them, keep the patient clean and dry, changing his position whenever practicable; keeping the feet warm assists circulation; keep the under sheet free from wrinkles and crumbs; remove pressure from prominent parts by using air-cushions or like appliances.

Soap plaster is sometimes applied to exposed portions or bathing with bay rum, whisky, witch hazel, camphor, or vinegar, etc., but the best way is to strengthen the skin's resistance by bathing with alcohol, pure, or with the addition of two grains of bichloride of mercury to each ounce; keep the bottle handy and bathe often—whenever opportunity offers. This treatment hardens the skin, and promotes circulation, and should be commenced at the beginning of illness, before the skin is even reddened. Should reddening appear, apply flexible collodion, or dust with zinc oxide, talcum, or other good powder after bathing.

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### HUMAN HABITATIONS MAKE A SPRING DANGEROUS.

*The Healthy Home* points out that the popular notion about a spring is liable to lead to great mischief. A spring bubbles up even in a thickly settled community, its water clear, cold and sparkling, and people believe that it must necessarily be pure.

If the surrounding territory is thickly settled the chances are that the water is very far from pure for most springs are fed by waters which flow on the surface of the ground and sink in somewhere in the immediate neighborhood.

Not long ago there were eight cases of typhoid fever in a certain town in Eastern Kansas. Six of these cases were known to be users of the local spring situated in the residence district. This spring had obtained a reputation for great purity of water long before there were any houses on the hill above, though the hill is now built up very closely.

There were several deaths from the typhoid cases which arose among the users of this spring water. The stream outcrops from the shale under a limestone ledge at the foot of the hill. Investigations showed a privy vault a hundred feet above the spring. This vault is in a small ravine which culminates very close to the spring. The drainage from a barnyard above also comes very close to this ravine.

The hill is now dotted with barnyards and privy vaults, yet in spite of this, people had continued to use the water and thought it good. Analysis showed it to contain a large quantity of nitrates, nitrites, and ammonia, besides organic matter.

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# MEDICAL PHARMACY.

## MITHRIDAT AND THERIAC.

(Concluded.)

THE fame which the theriac of Andromachus attained as an antidote soon led it to be regarded as a universal panacea. Indeed, so great was the esteem in which it was held that edicts were issued by the colleges of medicine and the magistrates regarding the purchase and keeping of the ingredients that entered into its composition; and the actual compounding of the theriac became a public function. Thus, we find an ordinance issued in the city of Nuernberg in 1547, commanding that Mithridat, Theriac and other "fuernembsten Arzeneyen" are not to be prepared by the apothecaries until after a commission of physicians had inspected the ingredients and certified to their good quality. Hieronymus Brunschwyk writes in the sixteenth century:

"When Theriac is to be made, each of its component parts should be exposed for at least two months in a public place, as at Venice, so that the wise men and the doctors may inspect them, and decide whether or not they are fit for use."

We know that in the seventeenth century Moise Charas never prepared Theriac save under the eyes of the magistrates of Paris, the court physicians, and delegates representing the school of Medicine, a practice which was continued until near the end of the eighteenth century and which was attended with great solemnity, as is proved by the following public notice, issued at Paris in 1776:

"Theriac of Andromachus.—The Company of Apothecaries at Paris shall expose to public view all of the drugs which enter into the composition of Theriac. The drugs will be opened in the presence of the magistrate and the School of Medicine on Monday, September 23, 1776, at precisely three o'clock, in the Company's garden and laboratory, Rue d' Arbalete, Faubourg St. Marcel.

"The whole shall be exposed for fifteen days, every day from 3 P. M. until 6 P. M., after which exposure we shall proceed to the preparation of this antidote in the presence of the worshipful magistrates and of the Faculty of Medicine."

**An Interesting Sample of Polypharmacy.**

Among the many writers on this supposedly wonder working preparation was a famous Italian physician named Guilelmo Rondeletti, who after an elaborate description of the ingredients gives the formula for the Theriac which was officially adopted by the learned doctors of Montpellier. This is so curious a piece of polypharmacy that we reproduce it in the original Latin:

Rp.
Pastillorum Scillinorum, drachmas XLVIII
Pastillorum Theriacorum
Magmatis hedychroi
Piperis nigri
Opii singul, aa drachmas XXIV
Rosarum siccarum
Scordij Cretensis
Semin. Napi
Iridis Illiriacae
Agaric. Pontici
Cinnamomi
Glycyrrhiza succi
Opobalsamum, aa drachmas XII
Croci
Zingiberis
Rhapontici
Radicis quinquefolii
Nepitae
Marubij
Petroselini
Stoechados
Costi
Piperis albi
Piperis longi
Dictamni cretens
Iunci odorati
Thuris
Terebinthinae
Cassiae fistulae
Nardii indicae, aa drachmas VI
Polij cretens
Seselios
Styracis
Seminis Apii
Thlaspi
Ammeos
Chamaedryos
Chamaepitos
Succi hypocisthidis
Nardij Gallicae
Radicis Gentianae
Anisi
Mel Athamantici
Seminis foeniculi
Terrae lemniae
Chalcitidis
Amomi
Acori
Phu Pontici
Carpobalsami
Hyperici
Acaciae
Gummi
Cardamomi, aa drachmas IV
Seminis dauci
Galbani
Sagapeni
Onoponacis
Bituminis
Castorei
Centaurij tenui
Aristolochiae tenuis, aa drachmas II
Mellis Attici
Vini Falerni q. s.

The first three ingredients contained twenty-three substances, and the Theriac, therefore, was a compound of eighty-five

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simples. It is perhaps needless to say that an article of this kind was extremely expensive, and utterly beyond the reach of the poor. For their benefit a simpler preparation, composed of only thirteen ingredients was made; and this, we fancy, was every bit as efficacious as the more elaborate one.

The fourth Austrian Pharmacopoeia had a formula for "Theriaca Andromachi" calling for twelve ingredients; but this preparation was merely an aromatic electuary possessed of no medicinal value. The days of polypharmacy are past, and it is inconceivable that a day will ever come when combinations like Mithridat and Theriaca Andromachi will be restored to the proud place which they once upon a time occupied in the official books of standards.

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## THORIUM PASTE.

Fred M. Dearborn describes this in the *Habuemannian Monthly*. Like all thorium studies, he says, we start with thorium oxide known as thoria, and by precipitation and other chemical manipulation thorium X, a highly radio-active substance, is supposedly produced. The protoxide and sulphate of lead, sulphuric acid and a small amount of hydrochloric acid are used to complete the preparation. This semi-liquid paste is creamy in consistency, and greyish-white in color; separates when standing into a lower layer of the metallic elements and an upper layer of liquid, acid in reaction, caustic in action and translucent.

Ordinarily it should be thoroughly mixed and applied with a camel's hair brush, orange stick or narrow wooden spatula. Cotton on a probe may be used, or the end of a wooden tooth pick, if only a small quantity is desired. Experience alone will show whether the full strength is best for any particular case. If not, wash off the liquid to any extent needed and the destructive effect will be lessened in proportion as it is diluted. I have found it wise to apply full strength to those lesions that present unbroken surfaces, such as discoid and nodular epitheliomata, nævæ, verrucæ, and lupus erythematosus. The same rule holds good where counter irritation and stimulation are desired. When ulcers and raw surfaces are to be treated, the surfaces should be dried as thoroughly as possible, usually by pressure and a degree of dilution used, consistent with the depth, extent, duration and location of the lesion. Pain at the seat of application may be experienced, lasting not longer than four hours in the more exposed lesions. Usually burning, aching and smarting are experienced in varying degrees. For extensive use, that is, in its application, to large areas of diseased skin, a one to five per cent strength in water should be used and as the surface becomes more healthy, the strength may be increased or you may use various strengths simultaneously on different sections of the same growth. For the treatment of indolent scaly eczema and old persistent psoriasis, thorium is best applied in lanolin, using ten to twenty-five per cent of the paste. It might be well to add that thorium paste which dries as a thin white layer should be allowed to remain as long as possible, and it is often well to paint a fresh coating over the old one unless serous discharges have loosened the former application. In cases that are very sensitive to pain, I have applied the paste to the healthy scab, hence securing a good foothold and not subjecting the patient to unnecessary suffering. These applications of thorium may remain, if undisturbed, from five days to three weeks, and may be protected by bandages, vaccination shields and other means, after becoming thoroughly dry.

This preparation is radio-active, as can easily be proven; it has antiparasitic, antiseptic, antipruritic, escharotic and stimulatory effects. Thorium salts, no doubt, possess some special properties of their own, for it is believed that all radio-

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active substances have certain chemical and physical peculiarities, and many possess material advantages over radium, so it is probable that as they are better understood, their usefulness may greatly exceed that of radium, which is the only radio-active substance now largely in use. From the standpoint of radio-activity, the chief objection to salts other than those of radium, is their lack of certain rays, and their comparative radio-active weakness, but this objection may be removed if it can be determined just how strong, relatively speaking, the thorium X examinations are in this formula under consideration, and to just what extent their strength may be sufficiently constant; in other words, how long will this paste retain enough radio-active power, to be useful therapeutically.

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### OINTMENT ROSE WATER.

*Therapeutic Medicine* thinks the official formula for Ointment Rose Water (*Unguentum Aquae Rosae*) is a good one and answers practically all pharmaceutical requirements. However, according to Valentine Schmidt, of San Francisco, there are several objections to it, namely: its cost and its instability (particularly in hot weather). He suggests replacing the expressed oil of almonds by pure white Russian mineral oil, and the rose water by distilled water and oil of rose. The following formula has been in use for years and has given perfect satisfaction in every respect:

| | |
|---|---|
| White wax | 5½ oz. tr. |
| Spermaceti | 5½ oz. tr. |
| Russian mineral oil [?] | 30 oz. tr. |
| Distilled water | 12 fl. oz. |
| Sodium borate | 2½ drs. |
| Oil rose | 30 drops. |

Melt the wax and spermaceti over a slow fire in a large porcelain evaporating dish; tare, and weigh the oil into it; then apply a gentle heat until clear. Dissolve the borax in the distilled water, previously heated to 150 degrees F.; allow the wax, spermaceti and oil to cool to about the same temperature; add the solution of borax all at once and stir briskly for a few minutes, then add the oil of rose, continuing the stirring until cool.

Thus, prepared, it is a snow-white, elastic, creamy-looking ointment, which will keep almost indefinitely.

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### WASHED SULPHUR.

The *Eclectic Review* remarks that sulphur, when thoroughly washed with distilled water until the liquid has no acid reaction and then dried, becomes sulphur lotum. It is the form of sulphur commonly employed internally. The flowers of sulphur (sulphur sublimentum) is usually employed externally and for purposes of fumigation.

This old remedy is now seldom mentioned by medical writers, but it often constitutes a good antiseptic, alterative, stimulant, diaphoretic and laxative. Some of our older practitioners may remember when the dear old grandmothers were wont to insist that it was absolutely necessary for all of the children to take sulphur and molasses at the close of the winter months. The rule was a good-sized dose every other morning for at least a week. The old ladies believed sulphur to be a "great purifier of young blood," and I am not prepared to prove that they were wrong. In chronic affections characterized by conditions usually regarded as of a scrofulous nature, sulphur has been employed with most gratifying results, and in catarrhal states of mucous surfaces following suppression of eruptions, it has proved an efficient medicament. In skin diseases, especially when accompanied by itching, which is increased by warmth, it exercises a relieving influence, and in scabies its action is often promptly curative. In glandular enlargements sulphur constitutes a remedial agent of usefulness, but in this condition it is inferior to specific phytolacca. It has also been found of some value in secondary syphilis, and in rheumatic and gouty affections its action has given much satisfaction.

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Sulphur is not only a good internal medicament, but useful in the form of an ointment. An ointment may be made from thirty parts of sublimed sulphur and seventy parts of benzoined lard, by rubbing the sulphur with the lard gradually added, until they are thoroughly mixed. The ointment should be applied with brisk friction, and its application preceded and followed by warm baths. It is especially valuable in scabies.

The dose of sulphur lotum is 1 to 15 grains, but it is efficiently employed in doses of 1 to 5 grains, in trituration or in tablets. As a laxative 30 to 60 grains in milk have given satisfaction.

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### POISONING BY MALE FERN.

A remarkable case of poisoning by extract of male fern is reported by Magnus-Levy in the *Berliner Klinische Wochenschrift* of March 27. A soldier took a mixture of extract of male fern and castor oil with the object of removing a tapeworm. Soon after taking the dose, the patient was seized with vomiting and diarrhoea, and some hours later cramp-like pains were felt in the left leg. The knee was fixed and the foot and toes paralysed, and convulsive movements appeared in the right leg and in both arms. The left leg gave great trouble for some six weeks, but the symptoms were eventually got under by means of potassium iodide. Writing to the *Lancet*, in which an abstract of the article appeared, Dr. James Burnet, of Edinburgh, points out that it is most unwise to give either male or santonin in conjunction with castor oil. The oil dissolves the vermifuge drug and causes absorption into the system, with disastrous results. Calomel or some purgative other than castor oil should be used with these drugs. The danger of administering santonin with castor oil has been pointed out a number of times.

### MIXTURE BUCHU AND JUNIPER COMPOUND.

Potassium acetate.....2 oz.
Buchu ground (No. 20).....2 oz.
Juniper ground (No. 20).....1 oz.
Syrup (simple).....5 fl. oz.
Oil sassafras.....5 min.
Alcohol.....
Distilled water.....
to make 20 fl. oz.

Moisten the powders with equal parts of alcohol and water, and percolate with 20 per cent alcohol to 14 fluidounces. Dissolve the oil in 1 fluidounce of alcohol, add to the previous mixture, and last add the syrup.

Dose: 1 to 2 fluidrachms (4 to 8 Cc.).

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### DIGITALIS IN COMBINATION WITH ERGOTIN.

Despite all theoretical considerations upon the action of ergotin upon the vessels, A. Hecht finds that it is often of decided advantage to combine digitalis with this drug. In this way a pronounced diuretic effect may be obtained even when the combination of digitalis with the modern diuretics has failed. He uses the following formula:

Pulv. Digitalis.....1.0 Gm.
Hydrargyri Chloride Mitis.....2.0 Gm.
Bulb Scillæ.....3.0 Gm.
Ergotin .....4.0 Gm.
M. ft. pil. No. xl.
Sig: Four to six pills daily.

If the circulatory disturbance returns and the pills are again indicated, the following formula may be substituted:

Pulv. Fol. Digit. Titr.....1:0 to 2.5 Gm.
Ergotin .....2.5
Bulb. Scillæ.....3.0
Hydrargyri Chloridi Mitis..0.5
M. ft. pil. No. l.
Sig.: Two pills three times daily.

It is likely that ergotin counteracts the vaso-constrictor action of digitalis and helps to dilate the smaller renal vessels just as it does the coronary vessels.

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**Septic Gincivitis.—**

Acid Salicylic.....aa 1.0.
Acid Benzoic.....aa 1.0.
Tr. Krameriæ..... 6.0.
Alcohol .....30.0.

M. Sig.: A teaspoonful in a wineglassful of water as a mouthwash.

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# CORRESPONDENCE.

## NAUHEIM TREATMENT OF TUMORS.

DR. A. O. ZWICK,
Cincinnati, Ohio.

*Dear Doctor*:

I was interested in your article published in July number MEDICAL BRIEF on non-operative treatment of certain tumors.

I write to inquire how I can ascertain the particulars of the Nauheim course of treatment.

I will be greatly obliged to you for the above information.

Yours very truly,
(*Signed*) GEO. S. WALKER, M. D.

DR. GEO. S. WALKER,
207 East Frederick Street,
Staunton, Va.

*Dear Doctor Walker*:

Pardon my failure to reply earlier to your letter of inquiry of July 11th, 1911, but I have been away and did not get a chance to attend to this before besides having an article on the subject in preparation which I hoped would be out before this and which I would have sent you at once—I shall still do so as soon as I am able. This much I am glad to tell you at once. The Nauheim Baths have been found extremely beneficial in circulatory disturbances, particularly heart-trouble. Nauheim is a bath in the Taunus in Germany to which some 50,000 people flock annually to take the baths and drink the waters. The bath is a highly charged, carbonated water; as the bubbles of gas impinge upon the bathers skin and burst, they cause a gently but pronounced glow to spread over the entire body, and evidence of a decided increase in the surface-circulation thus unloading the heart by causing the blood to flow spontaneously into the superficial vessels without the heart having to pump and force it there. It thus acts much like GLONOIN (Nitro-glycerin) and like this is useful for the relief of symptoms associated with the high tension-pulse of chronic renal degeneration (White's or any other Materia Medica will give you details and indications). That the increase in the surface-circulation is mechanical, and directly due to the impact of the exploding gas-bubbles is neatly shown by the exact demarcation of a line showing exactly how far the body, or a limb, have been immersed; everything *below* the line being a dark brownish red in color and everything above being the normal white color of the natural skin.

The duration of a bath is from ten to twenty-five minutes according to prescription, depending on the patient's condition and needs; short baths in the beginning, gradually prolonged as the patient's strength and tolerance increases. Such symptoms as light-headedness, vertigo, fainting-spells being of course counter indications, their absence together with proper hearts-action and pulse on the contrary permitting the longer bath. The same rules hold good as to the temperature, low (about 90°F.) in the beginning, gradually increased to higher temperatures (105 and over.) These increases in duration and temperature are to extend over the entire course of the baths which consists of twenty-one in number, given at the rate of three a week, thus making the entire course of seven weeks duration.

Of course during this time the patients must be closely watched as to the symptoms above mentioned, as to stomach-condition, proper regulation of hours of sleep and exercise, diet, constipation especially being avoided, etc., etc.

I formerly gave these baths right in my office which is arranged somewhat

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on the order of a small hospital. I successfully treated many other conditions besides heart-troubles and Brights-disease with these baths, for instance Rheumatism, Neuralgia and other similar affections.

One of my most remarkable successful cases was the complete and absolute cure of a case of sciatica, obstinate, intractable and long duration, extremely painful, the patient being absolutely unable to sit down squarely on even the softest-cushioned chair, always being compelled to nurse that side (the right) on account of the pain which was so severe day and night that nothing but morphine would relieve it. One course of the baths relieved this patient of his affliction so completely that he has never had a return of it, not even a twinge, and that was more than six years ago.

The proper diet is a very important matter; it should be *light,* yet substantial and nutritious; salads are highly recommended, meats must be reduced in amount but not altogether omitted.

Now as to the preparation of the baths; of course the Nauheim waters not being available the bath must be artificially charged with $CO_2$-gas; this is done in some instances by means of the liquid carbonic acid gas, in most cases, however, chemicals are used, but these latter are very hard on the bath-tub, special arrangements and precautions being necessary to avoid this.

The best place that I now know of in this vicinity to give a patient a course of these baths, is Scarlet Oaks where they are admirably fixed to do this, in every way both as to the baths and the culinary arrangements, which are perfect, as well as with regard to the grounds which are very beautiful and afford ample opportunity for the course of graduated exercises to be prescribed.

You might communicate with Miss Golder, the Superintendent and ascertain all about terms and room, etc., for your patient.

If I can be of any other service to you or your patients, please command me.

Having had several other inquiries on this subject I am going to take the liberty with your permission of publishing an outline of this letter in the MEDICAL BRIEF, and refer correspondents to the same for answer to their communications.

I am also giving your name and address to the Scarlet Oaks authorities with a request to communicate with you at once and giving you the information you desire. This I trust will, at least in a measure, make up for the delay that I inadvertently am the cause of.

Under separate cover I am sending you some reprints on various subjects, Tuberculosis, 606, etc., that I trust may interest you.

I should at all times be pleased to hear from you and promise to be more prompt in the future.

Trusting you will pardon me this time, I beg to remain,

Yours very truly,

(*Signed*) A. O. ZWICK, M. D.

* * *

*Editor* MEDICAL BRIEF:

Please look up the literature on the hypodermic use of eucolyphtus and give us a good long editorial on it, or what would be better a good long original article on it. Give the size doses used, how often repeated, the form used, whether oil tincture, etc. The place the injections are made, whether it is given just under the skin or into the muscles, etc.

I have enclosed references to literature and checked off what I believe to be the most important.

Several years ago I read an article on eucalyptus by Dr. A. C. Cowperthwarte of Chicago, who is a homoeopathic physician, professor and author, and I have always been impressed with the value of eucolyptus.

I believe eucolyptus is an agent that

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deserves investigation and especially its hypodermic use.

Hoping you will see your way clear in complying with my request, I am yours very truly.

Yours,

J. A. BURNETT, M. D.

Marble City, Okla.

(We publish this communication from Dr. Burnett in the hope that some of our readers may be induced to write us their opinion and experience on the subject. Meanwhile, we shall take steps to obtain an article thereon, as Dr. Burnett suggests, from an authoritative source, as early as possible.—Ed.)

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## A NEW JOURNAL.

*Editor* MEDICAL BRIEF:

With your kind indulgence I want to bring an important message to your readers. I am going to alternate my bi-monthly journal, "Physiologic Therapeutics," with "another new journal," which will bear the attractive title, "Successful Medicine." I believe that many of your readers will welcome this new journal, as it is to be a journal of commercial medicine, devoted solely to that side of practice which directly concerns the dollars and cents, published with the main idea of making its readers better-paid practitioners than mere brick layers or other skilled laborers who gain their skill with comparatively little sacrifice and who earn more than the average physician.

The financial side of practice is mighty important. They talk about the "science of medicine" and the "art of medicine," but if I am not badly mistaken, the dollars-and-cents side of medicine has been too lightly considered. Not, mind you, that the scientific and altruistic side of the doctor's work is depreciated—far far from it. Medicine today—as always—is filled with honest, scientific workers, and with men ever ready to help "the under-dog" when opportunity affords; but think of $700 a year as the income of the average American physician. Remember, too, that medicine unfortunately takes no note of the eight-hour law.

"Successful Medicine" will deal with the problems of the physician in his office, and especially with those which concern the business of getting results *and the money for it.* It will be published bi-monthly, beginning in September. It will be regular magazine size with a minimum of 48 pages, and the price will be only twenty-five cents a year. Since this journal will be devoted to such an important phase of medicine, surely every reader of the MEDICAL BRIEF must be interested. How many will subscribe probably in advance of publication?

Cordially yours,

HENRY R. HARROWER, M. D.

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In Neurosine is offered drugs of positive utility, which present in permanent and palatable form an elegant and efficient combination of well-known and long-tried remedies, concerning whose virtues in the diseases and conditions indicated there is absolute unanimity of expression among all observers and authors upon the subject. In Migraine Nysteria, Chorea, Neuralgia, Neurasthenia and Neurosis, Neurosine is prescribed with satisfaction both to patient and physician. For years Neurosine has been recognized as a most efficient remedy in the treatment of Epilepsy.

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## VAGINAL DOUCHE THERAPY.

Cash prizes to the amount of $1,000 will be awarded for the best articles upon the "Therapeutic Value of the Vaginal Douche" by the Marvel Company of New York.

The competition will be open only to physicians.

You have an excellent chance to win some money.

Why not try it? Read their advertisement on another page in this issue and get a part of the $1,000.

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# ELECTRO-THERAPY.

EDITED BY NOBLE M. EBERHART, A. M., M. D.
72 MADISON STREET, CHICAGO, ILL.
Professor and Head of Department of Electro-Therapy, Chicago College of Medicine and Surgery; Surgeon and Radio-Therapist to Frances Willard Hospital; Professor of High-Frequency and Vibration, Illinois School of Electro-Therapeutics, Chicago.

## THE DIRECT ELECTRICAL CURRENT IN SCIENTIFIC MEDICINE.*

BY B. T. GREEN, M. D., BROOKINGS, S. D.

IF an explanation of the choice of my subject were necessary it would be the desire to rescue a valuable therapeutic agent from the disappointments of empiricism and place it upon a dependable scientific basis.

To the end desired, this paper will consider the physical and chemical properties of the direct (galvanic) electrical current as to their effect upon living animal tissue, and will attempt to point out the current's proper and legitimate range of therapeutic usefulness. Its value as an actual cautery in the rapid destruction of pathological tissue and as a counter-irritant and heat-producing agent, and its diagnostic value in nerve degenerations and for the illumination of stomach, bladder, and other body-cavities and orifices, otherwise inaccessible to visual examination, are purposely omitted from the discussion. It considers only the therapeutics of the gentle, almost painless current produced by chemical decomposition in a battery of cells connected in series, with amperage, accurately measured by milliamperemeter and controlled by a rheostat that insures against jars, interruptions, or variations.

In the consideration of our subject it seems necessary to recall, briefly, a few principles of physics and chemistry connected with the production of the direct current, for, without these in mind, galvanism as a remedy is still empirical and unscientific.

In its most elementary conception a battery is an apparatus for the transformation of energy. Chemical disintegration within the cell disturbs the electrical equilibrium of the so-called ether, and the current is the result of its flowing together along suitable conductors outside of the cell to restore the equilibrium thus destroyed. The carbon terminal (positive pole or anode) is arbitrarily regarded as the higher level, hence the current as flowing toward the zinc terminal (negative pole or cathode). Under appropriate conditions these terminals, when immersed in a suitable medium (electrolyte) containing certain chemical substances in solution, bring about chemical decomposition by breaking up the molecule and setting free the elements or groups of elements (radicals) making up the molecule.

Within the electrolyte these separated elements, or groups, are designated as *ions*. Each ion carries its appropriate charge of negative or positive electricity, and moves toward the oppositely charged pole. Those moving from the positive are designated as electropositive and are called *anions*, while those moving from the negative are electronegative and are called *cathions*. Each ion, after delivering its charge of electricity at the pole, becomes a nascent element, or radical, ready to unite with the chemical affinities of the vicinity.

In the familiar example of the electrolysis of acidulated water, oxygen is liberated at the positive pole and hydro-

*Read at the 30th annual meeting of the South Dakota State Medical Association, Pierre, June 15 and 16, 1911.

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gen at the negative. What is true of water is also true of all chemical substances fulfilling like conditions, however simple or complex the substance. In the halogen group, salts of the metals and the alkaloids, invariably the elements represented by hydrogen, are liberated at the negative pole, and the radicals represented by oxygen are liberated at the positive pole.

It necessarily follows that if the electrolyte carries in solution a number of these chemical compounds, the analytic processes will be simultaneous. As the ions become nascent elements, or radicals, at their respective poles, and unite with other elements, or radicals, of the vicinity, a group of new compounds is formed. Necessarily, the free radicals have formed acids around the positive pole, and free metals and alkaline compounds surround the negative pole.

Now, if our electrodes, instead of being immersed in the electrolyte of the laboratory, are applied to an electrolyte of living animal tissue, i. e., the human body, with its content of water and salts of potassium and sodium, we have like results. Surrounding the negative pole are the alkaline hydroxids of sodium and potassium, while in the vicinity of the positive pole are the acids of the chlorides. It follows therefore that the physiological effect of the positive pole is that of an acid, while the physiological effect of the negative pole is that of an alkali.

The effect of an acid upon organized tissue is to harden the albuminoids, and contract fibrous structure, while an alkali softens the tissues and relaxes fiber. Therefore, with the acid positive pole relaxed tissues are contracted, softened tissues are hardened, congestion is reduced, capillary hemorrhage is relieved, and, since pain is accompanied by excessive alkalinity, the acid pole neutralizes the alkalinity and is a sedative to pain. On the other hand, at the negative pole we have the softening and relaxing effect of the alkalies; cicatrices, hardened glandular tissue, strictures, and fibrous growths and deposits are softened and absorption hastened; anemic areas are congested by capillary dilatation, hemorrhage is encouraged, and, by increasing alkalinity, pain is increased.

These diametrically opposite effects of the two poles indicate that, next to determining the adaptability of the direct current to any pathological condition, the choice of poles means everything; that this choice is based upon chemical activity; and that empiricism has no place whatsoever.

But the therapeutic value of the direct current does not stop with the acid and alkaline effects just described. It has been stated that certain chemical substances are decomposed at the poles, that the electropositive ions seek the negative pole, and the electronegative ions seek the positive pole. As a familiar illustration: If the electrolyte be a solution of potassium iodide, and the poles of a galvanic battery be immersed, the dark color of the free iodine is soon observed about the positive pole. It follows that, if a suitable electrode moistened with a solution of potassium iodide and attached to the negative pole, is applied to the moistened skin and the circuit completed, through a larger wet pad placed at an indifferent point, the current decomposes the potassium iodide into its elements, and the iodine ions, being electronegative, immediately seek the positive pole. In their journey through the tissues they are deposited as pure iodine, producing the characteristic iodine effect.

In like manner cocaine is released from its radical and deposited deeply, as with a hypodermic needle. But cocaine, being electropositive, the solution is necessarily placed upon the positive electrode. The process is known as *phoresis, cataphoresis,* or *anaphoresis,* according to whether the element so

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used is electronegative or electropositive. The metals are electropositive, and if metallic electrodes are used on the positive pole, the salts of the metals are deposited in the tissues. In electrotherapeutics, copper and mercury are extensively used for their antiseptic effects.

The very wide range of application of phoresis is at once apparent, and it is readily seen that where polar effect and phoresis may be combined the therapeutic value may be doubly efficacious.

If the foregoing be true, the value of the direct current in the treatment of pathological conditions rests entirely upon physical and chemical behavior under the universally accepted laws of science.

It remained only for such scientifically minded clinicians as Apostoli, Newman, Massey, Neiswanger, and others, to demonstrate the applicability of these principles to the treatment of many diseased conditions. The direct current is not a cure-all, but from the foregoing it is seen that it is an indicated remedy in many pathological conditions. Success in its application depends upon properly selecting and applying a suitable electrode, determining and employing a suitable quantity of current during a proper length of time, and, if required, repeating the treatment at proper intervals. In short, success depends upon mastery of principle and mastery of technic.

* * *

## H. F. CURRENTS IN HYPERTENSION.

The *Monthly Cyclopedia and Medical Bulletin* declares that the effect of high-frequency currents as employed for the treatment of high arterial tension is undoubtedly one of the greatest discoveries in modern therapeutics. Those who have not yet investigated these effects can little appreciate the remarkable results obtained from their employment. It is a fact that hypertension arising from autointoxication or other cause leading on to arteriosclerosis and other consequences of persistent hypertension is effectively lowered and controlled, often in advanced cases of arteriosclerosis, by autocondensation, diet and exercise, the patient being thereby maintained in a condition removed from the danger of cerebral hemorrhage. In most cases the blood-pressure will fall from 1 to 20 mm. after each seance of twelve to fifteen minutes, and under daily or alternate day treatment will be gradually lowered so that it can easily be kept between 140 and 150 mm. of mercury, at which level there is no danger from apoplexy. When once reduced it may be controlled with less frequent administrations, and without any danger of unfavorable effects. This should be generally appreciated by the medical profession; for no other means will accomplish such results.

* * *

## X-RAY TREATMENT OF SARCOMA.

Aspinwall Judd, in the *Medical Record,* applying the principle that the effect of the ray is to stimulate cell growth, argues that the effect upon sarcoma will naturally be the production of an adult type of connective tissue, that is, one rich in fibres, packed closely together, with few cells. The stimulation effected by the ray changes over the embryonal type of connective tissue into the adult type, changing a sarcoma into a fibroma. It also, by the production of an obliterating endarteritis, deprives the growth of a certain amount of its nourishment. The contraction of the growth also tends to reduce its vascularity, the end product being a fibroma with an inclusion of nests of sarcoma cells within its mass. In determining whether we shall treat a sarcoma with the X-ray the operability of the tumor comes into question. In these cases the writer strongly recommends its elimination by means of surgical procedure in all possible cases. Where we have an inoperable sarcoma, however, we are justified in the use of the ray. We have been fortunate in being able to

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cause a disappearance of about 40 per cent of these tumors.

*Recurrence.*—It is, unfortunately, true, says the author, that nearly all these cases recur after a time. The nests of cells included in the mass take on renewed energy, and it is essential that a second series of treatments be instituted. These recurrences react, however, just as kindly, in many cases, as the initial tumor. I have personally rayed a number of second and third recurrences with satisfactory results, and in one case I was compelled to treat the tumor for the fifth time. This case is now of six years' standing, and at the present time shows no sign of further recurrence. It must be remembered of these cases that we never get a complete disappearance of our mass. A fibroma of an extent proportional to the original tumor always remains. Where we can do so, it is advisable, after raying these cases, to enucleate the remaining mass. It must also be borne in mind that the danger of metastases is always present while our patient is undergoing treatment. In melanotic sarcoma this is a very grave danger; in spindle-celled, round-celled, and fibrosarcoma, proportionately less; and in osteosarcoma, still less. Osteosarcoma is more resistant to the action of the ray than any other type with which we have had to deal.

*Details of Treatment.*—If we are dealing with a deep-seated tumor of any type we must select a tube with the greatest penetration possible, *i. e.* a high tube with a large number of penetrating X-rays. The patient should be protected except for the parts to be rayed. As it is essential, owing to the location of the growth, that a larger area should be exposed, our protection is necessarily less complete than in superficial conditions. The tube is best placed at a distance of nine to twelve inches in the beginning, the exposures starting with ten minutes application two or three times a week, with an increase in the length of exposures and decrease in the distance, if it is deemed necessary after the idiosyncrasy of the patient is determined. These cases react very slowly, the treatment often extending over months. In one case four months was required before any effect was shown, and ten months before the final cicatrization of the mass. We must not fail to keep in mind the fact that a severe burn, in treating these cases, will produce a rapid increase in our growth and a rapid dissemination of metastases. In our earlier treatment I lost a case of osteosarcoma of the tibia in its third recurrence by failure to observe proper precautions, a severe burn going on to a spectacular growth of the tumor with metastases, resulting in death.

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## ELECTRO THERAPEUTICS AND RADIOLOGY.

The *Lancet* publishes a report of the proceedings of the section on these subjects of the British Medical Association, representing their progress in the past year and their present status, which we reproduce for the benefit of our readers.

In opening a discussion on

**The Therapeutic Uses of Radium.**

Mr. Deane Butcher said that the time had come when it was possible to make a sane and sober judgment as to the utility of radium, and the cases which were amenable to radio-action treatment. The cases specially suitable were small circumscribed lesions of the skin. He protested against the practice of excising a portion of a doubtful growth for diagnostic purposes, since this defeated the very object of radium treatment—viz., the destruction of the neoplasm without opening the lymph channels. In extensive or deep-seated cancer the most hopeful procedure was to introduce the radium into the interior of the growth by a surgical operation or to introduce the radium ion itself by Hasel's electrolytic method. Mr. Deane Butcher alluded to the theory of immunisation by radiovaccination as a possible explanation of the good effects

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of radium irradiation. With regard to measurement, he considered that the dose should be defined accurately by the weight of pure metallic radium contained in the specimen used. The prescription for radium irradiation should include weight of metallic radium, area of applicator, thickness of screen, and duration of irradiation. He alluded to the approaching opening of the Radium Institute, which would afford to poor and rich alike in this country an adequate supply of radium. He hoped that the new radio-active substance, meso-thorium, would perhaps partially replace radium, and at all events help mitigate the present radium famine.

Dr. J. H. Sequeira (London) gave a short account of his experience of the use of radium at the London Hospital and in his private practice. He had treated nearly 400 cases, and emphasised the fact that in the majority of early cases of rodent ulcer the results were admirable. The factors which militated against success were the involvement of cartilage and bone and the spread of the disease into the orbital cavity. He was accustomed to apply the radium in the form of sulphate spread upon metallic plates.

Dr. Finzi spoke of the great value of proper filtration in radiumtherapy, which had to be modified both as to material and thickness depending on the requirements of the case and other circumstances. He also referred to the pronounced action of the beta rays of radium in the production of fibrous tissue.

Mr. W. Holder (Hull) spoke of the good results obtained by the use of small quantities of radium in cases of malignant disease as well as other local conditions. He emphasised the danger of making the intervals between applications too short.

Dr. G. William Hill (London) referred to the results obtained in œsophageal strictures, which were very encouraging up to the present. He also asked for some standardisation of dosage.

Mr. Colin Campbell (Southport) also bore testimony to the good results that were to be obtained from the use of small quantities of radium, and he quoted instances of its great value in tuberculous ulcerations, and particularly in pruritus.

The prominent feature of this discussion was the evidence brought forth as to the large amount of good work that could be done with small quantities of radium, even though it be not of the highest possible activity.

Professor J. K. A. Wertheim Salomonson (Amsterdam) described and showed

**A Modified Form of Benoist's Penetrometer**

for measuring the hardness of the X-ray tube. It might perhaps be more accurately described as a modification of Wehnelt's, which it more closely resembles. The improvement consists in the provision of two wedge-shaped pieces of aluminium, inverted to each other, so that as one is moved over the other the whole of the aluminium within the field of vision is of even thickness for all degrees of penetration. The instrument is being made in this country by Messrs. Newton and Co.

Dr. Reginald Morton (London) read a paper to introduce a discussion on

**The Present Position of the X-Ray Treatment of Malignant Disease.**

He considered that the present time was a very good one to take stock of our position in this respect, but in connexion therewith he felt there were several points that wanted clearing up, and upon these he particularly invited discussion. Assuming that our object is to destroy or otherwise remove the cancerous cells, how far beneath the surface is the x-ray method capable of bringing this about? Owing to the fact that the therapeutic value of the rays fell off very rapidly as the penetration increased and from observation in other ways, he was of the opinion that this could not take place to any appreciable extent beyond one-half

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inch from the surface of the growth. He considered that it was only those rays which were stopped and absorbed by the tissues that produced any effect upon them. He regarded the introduction of filters as one of the most important events in the history of radiology. He considered the non-metallic filters the most useful for this particular class of work. In the matter of dosage he had tried different methods, but now favoured fairly liberal doses given at comparatively short intervals. Massive doses at intervals of a week or so had given very poor results. He also invited an expression of opinion as to the relative value of the method in sarcoma and in carcinoma. In his own experience cases of carcinoma had so largely predominated that he found it difficult to draw a comparison. It was impossible to say how any particular case would respond to X-ray treatment, but cases of carcinoma did so more evenly than sarcoma and also more favourably, though among the latter class he had one of his most brilliant results. It was, however, always possible to tell after a few applications how the case was likely to respond to the method, and for this reason he considered a trial course of treatment advisable in all cases. Summing up, he stated that the influence of the method upon malignant disease was a most distinctly favourable one—pain was relieved, the rate of advance was greatly reduced and even arrested for a time, ulceration and accompanying discharge were checked, life was prolonged, and the patient made more comfortable in nearly every way. Unfortunately, treatment by any form of radiation gave us no control over metastasis. If we were to make any decided progress we must meet this difficulty to some extent at least. With this in view he made a plea for a closer coöperation between the surgeon and the radiologist than had existed up to the present. Taking operable cases first, he advised that a massive dose of x-rays should be given to the site of operation before the wound was closed—a perfectly feasible procedure—and further x-ray treatment as soon as the patient could bear it, carried on at intervals for a year or more. With regard to cases usually declared to be inoperable, the surgeon should not wash his hands of the case, as is so frequently done, but should consider whether it is not possible to remove the more superficial parts so as to allow the rays to get more or less directly at the part that really matters—the advancing margin.

In the discussion that followed most of the speakers were in agreement with the main points raised in the paper.

Dr. Finzi was not so sure that radiations which were unabsorbed did not produce some effect on the cells by the mere act of passing through.

Professor Wertheim Salomonson considered that the results of the X-ray treatment of malignant disease were not encouraging as a whole, but admitted that the more superficial cases at times did very well.

Mr. J. Hall-Edwards (Birmingham) considered that only in the most severe cases should massive doeses be given, but in ordinary conditions he thought mild doses repeated daily or on alternate days gave superior results.

Dr. J. Delpratt Harris (Exeter) related his experience with a case of sarcoma of the cheek which seemed to resist ordinary treatment and he decided to give a very massive dose. He administered the equivalent of 18 Sabouraud pastille doses, the sitting lasting nearly six hours. An aluminium screen, ½ mm. thick, was placed between the skin and the tube. The tumour rapidly shrank and gave every promise of doing well. No bad results were noticed from the massive dose.

Dr. W. Ironside Bruce (London) also gave his experiences with very massive doses of the X-rays, and felt that the method gave promise of good results in this class of disease.

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Dr. Ironside Bruce read a paper on

**Pyelography and the Use of Collargol in the Diagnosis of Diseases of the Urinary Tract.**

He said that collargol forms a perfectly inert solution which is opaque to the X-rays. In cases of suspected dilatation, for instance, of any part of the system this part is filled with the collargol solution and the part radiographed. The work had been done in conjunction with Mr. J. W. Thomson Walker, whose paper was published in *The Lancet* of June 17th, 1911.

At the afternoon session Mr. W. Armstrong (Buxton) reported the results of his treatment of over 600 cases by

**Radium Water**

by means of drinking, inhalation, and bathing; the two latter in conjunction with oxygen. He showed that the radium emanations were eliminated in order of quantity by the lungs, skin, and kidneys. He described the increased excretion and the greater amount of the body poisons carried off in the breath, perspiration, and urine; also the increased activity of the various digestive ferments, and the hastening of purin body metabolism, and of the excretion of uric acid. He gave examples of most satisfactory results in cases of gout, rheumatism, arthritis, neuritis, diabetes, Bright's disease, high blood pressure, and neurasthenia. Great stress was laid upon the value of the radium oxygen both in high arterial tension, insomnia, and skin trouble of nervous origin. Mr. Armstrong summed up as follows: (*a*) That the successful treatment of diseases by radium water demanded a high dosage; (*b*) that these large doses can be given without the least fear of ill-effect; and (*c*) that two points stood out as regards the value of this treatment: (1) the great increase in nerve strength and vitality; (2) the very considerable quantity of poisonous matter expelled from the body.

**A Review of Radium Therapy.**

Professor S. Saubermann (Berlin) gave the section a fairly complete review of all the work which forms the basis of to-day's radiumtherapy for internal use, and went into some detail regarding the physical, chemical, biological, and physiological properties of the emanation. His purpose was to prove that there really exists a close connexion between the emanation and certain processes which take place within the human organism. A large number of tables and experiments which he mentioned suggested that a quantity of energy is developed by the atomic disintegration of radium into a series of decomposition products, and though the emanation itself is absolutely inert, its mere presence brings about chemical reactions which are otherwise inconceivable, or which would normally be greatly accelerated. From this is derived the conclusion that biological and physiological influence upon living cells and organisms must take place. Professor Saubermann stated the following as "biological facts with regard to radium emanation," giving the date of the research and the name of the observer:—

1903—The preparation of radio-active water by means of radium for biological research. (Saubermann.)

1904—Radium emanation (R. E.) increases autolytic fermentation. (Neuberg.)

1905—R. E. increases the activity of the peptic ferment. (Bergell and Bickell.)

R. E. increases the activity of the pancreatic ferment. (Braunstein and Bickell.)

1906—R. E. increases the activity of lactic acid fermentation. (Richet.)

1907—R. E. increases the peristaltic actions. Deutelmoser and Saubermann.)

1908—R. E. increases the solubility of uric acid salts (urolytic fermentation). (Deutelmoser and Saubermann.)

R. E. increases the glycolytic fermentation. (Deutelmoser and Saubermann.)

1909—R. E. increases the activity of diastatic fermentation. (Edelstein.)

1910—R. E. penetrates the skin into the body. (Engelmann and Strassburger.)

1911—R. E. effects leukopenia. (Noorden and Falta.)

R. E. increases the coagulability of the blood. (Lazarus, Saubermann, and Velden.)

R. E. penetrates every animal membrane and tissue.

R. E. acts by its disintegration products.

The co efficient of solubility in blood is 0.20. (Lazarus and Saubermann.)

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The greater radio-active quality of mountain air plays an important part in human life. (Aschkinass and Kaspari.)

The radio-activity of the air is a matter of importance to the human organism. (Saake.)

In southerly winds (Sirocco, Samun), the physiological action of which is well marked, the radio-active capacity is exceptionally high. (Gockel, Aschkinass, and Kaspari.)

All increased radio-activity in mineral springs makes itself felt in the human organism, a physiological factor which cannot be ignored. (Bergell, Bickel, and Himstedt.)

The higher the emanation capacity of a given spring, the more striking are the physiological results. (Mache, Curie, and Laborde.)

Water rendered radio-active has a most unusual influence upon the human organism. (Bergell, Bickell, and Deutmann.)

Owing to inhalation of emanation, in the galleries of the St. Joachimsthal pitchblende mines, where the air is radioactive, gout, rheumatism, and neuralgia do not occur. (Gottlieb, Kemen, and Deutwitz.)

Occurrence of bladder activity, increased diuresis, and exacerbation of pains in baths with radio-active water. (Neusser, Saake, and Wilke.)

R. E. has a favourable effect upon organic metabolism. (Deutelmoser, Saubermann, Silbergleit, and Kijokki.)

Importance of radium emanation in disturbed organic metabolism. (Krieg.)

Increase in the excretion of urea up to 34 per cent and of uric acid up to 14 per cent. (Wilke.)

The cardiac blood pressure, diuresis, excretion of urea and uric acid are influenced. (Deutelmoser, Saubermann, and Krieg.)

R. E. lessens blood pressure and cardiac activity. (Deutelmoser and Saubermann.)

A certain percentage of radio-active electric ions in the air is absolutely necessary, especially for gouty and rheumatic patients. (Steffens and Grabley.)

R. E. has the power of keeping the uric acid compounds in their easily soluble forms. (Deutelmoser and Saubermann.)

R. E. acts both as a powerful nerve sedative and as a hypnotic. (Pollack and Dreuw.)

"If emanation will activate ferments, a very broad basis for a scientific therapy has been established," said Professor Saubermann, who considered that a normal secretion and mutual activation of ferments are indispensable to the synthesis of simple, classical compounds derived from nourishment. His clinical results so far obtained cover, he said, "as they logically should, the vast field of body metabolism, and have proved of great benefit in the treatment of gout, rheumatism, diabetes, nephritis, high blood tension, and other complaints of similar character, as shown by numerous leading authorities, such as Bergell, Lazarus, Schiff, Bickel, Peters, Sandmayer."

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## BROMISM.

When Peacock's Bromides are given over a prolonged period, as is often necessary in epilepsy and nervous diseases, its advantages over commercial substitutes are unmistakable. While bromism cannot be absolutely prevented in patients having an idiosyncrasy toward bromides, it has been positively demonstrated that Peacock's Bromides can be given with greater freedom from untoward action, and that frequently the preparation can be employed to continue bromide treatment after the commercial bromides were necessarily discontinued. This severe trial is perhaps the most convincing evidence of its superiority.

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## CYSTOGEN APERIENT.

### Granular Effervescent Salt.

This product is an excellent example of that type of worthy proprietary medicines which cannot be extemporaneously compounded and can be manufactured only by skilled chemists with the full facilities of a large laboratory. The formula has always been open to the profession and the advertising has been free from the objections so often urged against proprietary medicines. It is not presented as a saline purgative, but as a rational therapeutic aid wherever treatment is based on *elimination* of waste products. The formula shows that each teaspoonful contains

Cystogen ($C_6H_{12}N_4$).....gr.v.
Sod. Phosphate.....gr. xxx.
Sod. Tartrate.....gr. xxv.

Cystogen-Aperient, it will be seen from the above, combines the laxative and tonic properties of sodium phosphate and tartrate with the urinary-antiseptic and solvent action of cystogen.

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# THE DOCTOR'S EASY CHAIR

## ON BEING IN THE BLUES.

I CAN enjoy feeling melancholy, and there is a good deal of satisfaction about being thoroughly miserable; but nobody likes a fit of the blues. Nevertheless, everybody has them; notwithstanding which, nobody can tell why. There is no accounting for them. You are just as likely to have one on the day after you have come into a large fortune, as on the day after you have left your new silk umbrella in the train. Its effect upon you is somewhat similar to what would probably be produced by a combined attack of toothache, indigestion, and cold in the head. You become stupid, restless and irritable; rude to strangers, and dangerous toward your friends; clumsy, maudlin, and quarrelsome; a nuisance to yourself and everybody about you.

While it is on, you can do nothing and think of nothing, though feeling at the time bound to do something. You can't sit still, so put on your hat and go for a walk; but before you get to the corner of the street you wish you hadn't come out, and you turn back. You open a book and try to read, but you find Shakespeare trite and commonplace, Dickens is dull and prosy. Thackeray a bore, and Carlyle too sentimental. You throw the book aside, and call the author names. Then you "shoo" the cat out of the room, and kick the door to after her. You think you will write your letters, but after sticking at *"Dearest Auntie—I find I have five minutes to spare, and so hasten to write to you,"* for a quarter of an hour, without being able to think of another sentence, you tumble the paper into the desk, fling the wet pen down upon the table-cloth, and start up with the resolution of going to see the Thompsons. While pulling on your gloves, however, it occurs to you that the Thompsons are idiots; that they never have supper; and that you will be expected to jump the baby. You curse the Thompsons, and decide not to go.

By this time you feel completely crushed. You bury your face in your hands, and think you would like to die and go to Heaven. You picture to yourself your own sick-bed, with all your friends and relations standing round you weeping. You bless them all, especially the young and pretty ones. They will value you when you are gone, so you say to yourself, and learn too late what they have lost; and you bitterly contrast their presumed regard for you then with their decided want of veneration now.

These reflections make you feel a little more cheerful, but only for a brief period; for the next moment you think what a fool you must be to imagine for an instant that anybody would be sorry at anything that might happen to you. Who would care two straws (whatever precise amount of care two straws may represent) whether you were blown up, or hung up, or married, or drowned. Nobody cares for you. You never have been properly appreciated, never met with your due deserts in any one particular. You review the whole of your past life, and it is painfully apparent that you have been ill-used from your cradle.

Half an hour's indulgence in these considerations works you up into a state of savage fury against everybody and everything, especially yourself, whom anatomical reasons alone prevent your kicking. Bed-time at last comes, to save you from doing something rash, and you spring upstairs, throw off your clothes, leaving them strewn all over the room, blow out the candle, and jump into bed as if you had

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backed yourself for a heavy wager to do the whole thing against time. There, you toss and tumble about for a couple of hours or so, varying the monotony by occasionally jerking the clothes off, and getting out and putting them on again. At length you drop into an uneasy and fitful slumber, have bad dreams, and wake up late the next morning.

At least, this is all we poor single men can do under the circumstances. Married men bully their wives, grumble at the dinner, and insist on the children's going to bed. All of which, creating, as it does, a good deal of disturbance in the house, must be a great relief to the feelings of a man in the blues; rows being the only form of amusement in which he can take any interest.

The symptoms of the infirmity are much the same in every case, but the affliction itself is variously termed. The poet says that "a feeling of sadness comes o'er him." 'Arry refers to the heavings of his wayward heart by confiding to Jimee that he has "got the blooming hump." Your sister doesn't know what is the matter with her to-night. She feels out of sorts altogether, and hopes nothing is going to happen. The everyday-young-man is "so awfully glad to meet you, old fellow," for he does "feel so jolly miserable, this evening." As for myself, I generally say "that I have a strange, unsettled feeling to-night," and "think I'll go out."

By the way, it never does come except in the evening. In the sun-time, when the world is bounding forward full of life, we cannot stay to sigh and sulk. The roar of the working-day drowns the voices of the elfin sprites that are ever singing their low-toned miserere in our ears. In the day we are angry, disappointed, or indignant, but never "in the blues," and never melancholy. When things go wrong at ten o'clock in the morning, we—or rather you—swear and knock the furniture about; but if the misfortune comes at 10 p. m., we read poetry, or sit in the dark, and think what a hollow world this is.

But, as a rule, it is not trouble that makes us melancholy. The actuality is too stern a thing for sentiment. We linger to weep over a picture, but from the original we should quickly turn our eyes away. There is no pathos in real misery: no luxury in real grief. We do not toy with sharp swords, nor hug a gnawing fox to our breasts for choice. When a man or woman loves to brood over a sorrow, and takes care to keep it green in their memory, you may be sure it is no longer a pain to them. However they may have suffered from it at first, the recollection has become by then a pleasure. Many dear old ladies, who daily look at tiny shoes, lying in lavender-scented drawers, and weep as they think of the tiny feet whose toddling march is done; and sweet-faced young ones, who place each night beneath their pillow some lock that once curled on a boyish head that the salt waves have kissed to death, will call me a nasty cynical brute, and say I'm talking nonsense; but I believe, nevertheless, that if they will ask themselves truthfully whether they find it unpleasant to dwell thus on their sorrow, they will be compelled to answer "No." Tears are as sweet as laughter to some natures. The proverbial Englishman, we know from old chronicler Froissart, takes his pleasures sadly, and the Englishwoman goes a step further, and takes her pleasures in sadness itself.

I am not sneering. I would not for a moment sneer at anything that helps to keep hearts tender in this hard old world. We men are cold and common-sensed enough for all; we would not have women the same. No, no, ladies dear, be always sentimental and soft-hearted, as you are—be the soothing butter to our coarse dry bread. Besides, sentiment is to women what fun is to us. They do not care for our humor, surely it would be unfair to deny them their grief. And who shall say that

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their mode of enjoyment is not as sensible as ours? Why assume that a doubled-up body, a contorted, purple face, and a gaping mouth, emitting a series of ear-splitting shrieks, point to a state of more intelligent happiness than a pensive face, reposing upon a little white hand, and a pair of gentle tear-dimmed eyes, looking back through Time's dark avenue upon a fading past?

I am glad when I see Regret walked with as a friend—glad because I know the saltness has been washed from out the tears, and that the sting must have been plucked from the beautiful face of Sorrow e'er we dare press her pale lips to ours. Time has laid his healing hand upon the wound, when we can look back upon the pain we once fainted under, and no bitterness or despair rises in our hearts. The burden is no longer heavy, when we have for our past troubles only the same sweet mingling of pleasure and pity that we feel when old knight-hearted Colonel Newcome answers "adsum" to the great roll-call, or when Tom and Maggie Tulliver, clasping hands through the mists that have divided them, go down, locked in each other's arms, beneath the swollen waters of the Floss.

Talking of poor Tom and Maggie Tulliver brings to my mind a saying of George Eliot's in connection with this subject of melancholy. She speaks somewhere of the "sadness of a summer's evening." How wonderfully true—like everything that came from that wonderful pen—the observation is! Who has not felt the sorrowful enchantment of those lingering sunsets? The world belongs to Melancholy, then a thoughtful deep-eyed maiden who loves not the glare of day. It is not till "light thickens, and the crow wings to the rocky wood," that she steals forth from her groves. Her palace is in twilight land. It is there she meets us. At her shadowy gate she takes our hand in hers, and walks beside us through her mystic realm. We see no form, but seem to hear the rustling of her wings.

Even in the toiling, humdrum city, her spirit comes to us. There is a sombre presence in each long, dull street and the dark river creeps ghost-like under the black arches, as if bearing some hidden secret beneath its muddy waves.

In the silent country, when the trees and hedges loom dim and blurred against the rising night, and the bat's wing flutters in our face, and the land-rail's cry sounds drearily across the fields, the spell sinks deeper still into our hearts. We seem in that hour to be standing by some unseen deathbed, and in the swaying of the elms we hear the sigh of the dying day.

A solemn sadness reigns. A great peace is around us. In its light, our cares of the working day grow small and trivial, and bread and cheese—aye, and even kisses—do not seem the only things worth striving for. Thoughts we cannot speak but only listen to flood in upon us, and, standing in the stillness under earth's dark'ning dome, we feel that we are greater than our petty lives. Hung round with those dusky curtains, the world is no longer a mere dingy workship, but a stately temple wherein man may worship, and where, at times, in the dimness, his groping hands touch God's

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## SOME NEW REMEDIES.

**Antisepticum Venol.—**
Said to be an aqueous solution of chinosol.

**Cebeda Powder.—**
Said to be composed of the powdered flowers of Roman chamomile.

**Choanol.—**
Contains oil of cedar principally, and is made by Apotheker Aschoff in Bad Kreuznach.

**Zeozon.—**
Contains, says the *Pharmazeutische Zentralhalle*, the monohydroxy derivativeof aesculin.

**Benetol.—**
A disinfectant, said to contain 18% of alpha naphthol solution together with water, glycerin and soap.

**Protoxyl.—**
Metaarsenous anilid, containing 36.69% arsenic. The mercury salt of this compound is called *atoxifil.*

**Dicentrin.—**
Analkaloid obtained from *Dicentra pusilla,* Sieb and Zuce, a Japanese plant of the family of Papavaraceal.

**Perisdan.**
A name given to dimethylamido pyrazolon by the manufacturers, Hoeckert & Michalowsky, of Berlin-Rixdorf.

**Cebeda Drops.—**
Described as a distillate from various aromatic drugs like cinnamon, cloves, juniper berries, rosemary and Roman chamomile.

**Pyrosin.—**
Compound syrup of pyrenol. Pyrenol is described as a compound of benzoic acid, salicylic acid and thymol in the form of a sodium salt readily soluble in water.

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## NAUCLEA EXCELSA, ANOTHER ANTI-OPIUM PLANT.

To the number of plants which have been employed, with more or less success, to destroy the craving for opium smoking, such as *Combretum Sundaicum* and *Mitragyna parviflora*, has recently been added *Nauclea* (Uncaria) *excelsa,* a plant of the family of Rubiaceae indigenous to Java. The leaves, which are the part employed for this purpose, possess a peculiar narcotic odor and yield, upon distillation with water, a yellow essential oil, which solidifies to a crystalline mass possessing the odor of wax. There has also been isolated from the leaves an alkaloid, naucleine, crystallizing in the form of needles which are quite soluble in chloroform, slightly in alcohol, ether and ethyl acetate and insoluble in water. The alkaloid melts at 264 degrees with decomposition.

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## THE WORDS "ASSASSIN" AND "HASHISH."

The word "assassin," which has grown somewhat too familiar of late, is, says the French translator of Abulghazi's "History of the Tatars," a corruption of "Arsacian," the original assassins of Persia having claimed to be descendants of Arsaces, the founder of the Parthian Empire. As a matter of fact, it is a form of "hashashin" (properly "hashashin"), which means one who is intoxicated with hashish, or Indian hemp. Historians tell us that the assassins of the eleventh and twelfth centuries were a fanatical sect of Moslems, who established themselves in the rock fortress of Alamut, in Persia, where they founded a society for the propagation of their doctrines, which resembled those of the Ismailis, but with this addition—they taught and practiced the duty of secret assassination against their opponents. Their chief, known as "The Old Man of the Mountain," used, it is said, before despatching his disciples upon their bloody errands, to throw them into a state of ecstasy by means of hashish, and hence their popular name. A branch of them afterwards migrated to Syria, where for awhile they preyed upon the Crusaders, several of whose leaders fell by their hands. All this is sober fact, as is the story of their ex-

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tirpation by Hulaku Khan and the Mameluke Bibars in 1256-70; but behind it there is a mass of legend and romance which inclines one to resent the application of their name to such miscreants as the Houndsditch burglars, who rob and murder to serve their private ends. Marco Polo gives a circumstantial and probably, in effect, true account of the Old Man of the Mountain of his time, and how, having made his young men drunk "with a certain drink," he caused them to be awaked in a gorgeous palace in a lovely valley, amidst attendant houris and all manner of sensuous delights, "insomuch that the fools thought they were in Paradise indeed," and were ready to do anything that would ensure them a perpetuity of such delights. Sir John Maundeville, who places this "paradise" in the lordship of Prester John, gives a still more highly colored account of its marvels and of the arts of its ruler, Gatholonabes. Both he and Messer Marco speak of the "drink" as inducing pleasant dreams rather than the insane fury of the historical assassins, and this, I believe, is more in accordance with the known action of Indian hemp, the effect of which drug cannot, however, says Allbutt, at present be diagnosed by its clinical character alone.—*Chemist and Druggist.*

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## DIGITALIS AND ITS PREPARATIONS.

The stability of digitalis preparations and other matters relating to digitalis have occupied the attention of many writers, both medical and pharmaceutical, for many years past. Dr. Gordon Sharp and Mr. J. Lancaster have a good deal to say in their paper on "Digitalis: Some Points as to Time of Gathering of the Leaves, and the Keeping Properties and Standardization of the Tincture, etc." The authors draw attention to three important points—(1) the number of leaves other than those of *Digitalis purpurea* which appear in the bags of amateur collectors; (2) large leaves or faded leaves, both weak in glucoside, may be included in the gathered material; (3) accidents in the process of drying may lead to breaking up of the glucosides, whereby enzymes may be caused to destroy the glucosides. With proper care and attention to such details, as referred to above, the authors are convinced that tincture of digitalis can easily be prepared which will answer the physiological and the clinical test. They are convinced that the preparation of effective tincture of digitalis is becoming much better understood, and they risk the prophecy that soon the pharmacologist will search in vain for a preparation that will fail to come up to the standard.—*Pharmaceutical Journal.*

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## ACTION OF LIGHT AND OF GLASS UPON SOLUTION OF MERCURIC CHLORIDE.

It has been supposed that aqueous solutions of corrosive sublimate are readily decomposed by light, thus:—$2HgCl_2 + H_2O = 2HgCl + 2HCl + O$. According to W. van Rijn (*Ph. Weekbl.*, 1908, 636), the formation of calomel is due to the presence of organic matter, while mercury oxychloride may be formed as a result of the action of the alkali in the glass of the containing vessel. (Scheringa, *Ph. Weekbl.*) exposed filtered solutions of mercuric chloride in carefully cleansed bottles of different kinds of glass to the action of light for three weeks. Solutions of different strengths were tried, and in no case was more than the slightest trace of decomposition detected. No reaction for hydrochloric acid was obtained with methyl violet. The action of light on mercuric chloride solutions is therefore very slight, and no action takes place at all if pure distilled water and bottles of alkali-free glass are used. The author recommends that mercuric chloride solutions should be kept and dispensed in brown-glass bottles.—*Pharm. Journ.*

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# The Medical Brief

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## EDITORIALS.

### SURGICAL PRECISION AND THERAPEUTIC GUESSWORK.

IT is little to be wondered at that there should have grown up in the past decade or so among medical men, and especially among the more recent graduates in medicine, a regard almost amounting to infatuation for surgery, and a corresponding indifference almost amounting to contempt for therapeutics. For this contrasted attitude therapeutics is itself largely to blame. The spirit of the times demands specialism, which means exactness. Surgery has lived up to this demand; therapeutics has not; that is the difference. One has only to be a witness to the consultation of a surgeon and an internist, respectively, over a given case to have this convincingly borne in upon him. In etiology, diagnosis, pathology—everything up to treatment—they are on the same ground. But directly the question of treatment is raised, the difference between them becomes at once marked. Asked to outline the treatment of the case, the surgeon promptly and crisply maps out a well-defined series of steps, with the confidence of a man who knows whereof he speaks, by which he expects to obtain equally well-defined results. The internist, under a similar inquiry, is usually all at sea; he knows not, and he knows that he knows not; so he proceeds to darken counsel with vain words and to offer as his therapeutic advice the same kind of stuff that he will presently offer as his medicinal treatment—high-sounding placeboes.

Even to the patient this difference is plain. Prone as he is to shrink and shudder at the rather cold-blooded advice of the surgeon, and at the harrowing details of what is proposed to be done to him (harrowing to the patient, no matter how the surgeon may soften them), there is, nevertheless, a certain confidence and hopefulness inspired in his demoralized mind by the certainty and exactness with which the surgeon talks. He feels that here is a man who knows his way, and to whom he can entrust himself, even through the dark valley of chloroform and vivisection. With the average internist, on the contrary, there is a vagueness of soft speaking which, while it soothes the childish panic that is in every patient's breast, as who should say, "Well, well, we'll see to that," yet it leaves an equally vague uneasiness in the man or woman's mature mind, which feels somehow that it must not ask the doctor for more accurate details of how it is to be "seen about," and that it would not get them if it did. It is little wonder, we repeat, that in spite of all the dread the surgeon's knife has inspired in the public mind, medicine has its thousands but surgery its tens of thousands.

Of all things, all qualities, that the twentieth century world demands in its workmen, clearness of knowledge and accuracy of workmanship are paramount.

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The world of t[illegible]o use for the man who *does not know.* Indeed, if one [illegible]eads histor[illegible]ever had. But today the facilities for knowing are so [illegible]ast, and the [illegible]de of knowledge in all departments so high, that one has [illegible]o know pret[illegible] and to act pretty directly to measure up to the standard. [illegible]ence if the [illegible] to rank with surgery in professional and public confidence [illegible]nd respect [illegible]d and exercise a precision of knowledge and practice equal to that exh[illegible]v[illegible]urgery. The underlying factor that is really responsible for the treme[illegible]nces in medical science in the past half century is the development of [illegible]p[illegible]ology. Surgery has availed itself of this pathological development, a[illegible] step with it. For every pathological Oliver surgery has produced a s[illegible]d R[illegible]land. Has therapeutics done this?

Th[illegible]e old shotgun is past; it is the age of the sighted, sharp-shooting rifle. [illegible] longer taught to discharge a handful of grapeshot at nothing and nobo[illegible]ular, but to fire a bullet at a very definite and carefully chosen bull[illegible]s the crux. The surgeon has armed himself with a modern, smokeless [illegible]Krag Jorgensen rifle and taken target practice, while the therapeutist (o[illegible]all[illegible]ents, the majority of him) is still blazing away with a blunderbust. T[illegible]n order to use rifles and bullets, we must have them supplied to us; but th[illegible]l very quickly follow an intelligent demand. Whence all this fussing [illegible]umin[illegible]about the jobs that are put up by the pharmacal detail men upon poor [illegible]physicians? Are the instrument houses putting anything over on the [illegible]d is he squealing if they do? Not that anybody knows about. He is [illegible]o the instrument houses, and getting what he demands, because he *knows [illegible]ants.* And so may the internist if he will but awake out of his trance.

[illegible] not, in the end, a question of supply, but of demand. When the therapist knows his own mind, and his own business, as clearly and decidedly as the [illegible] knows his, and demands therapeutic bullets and rifles instead of shotguns [illegible] grape, he will find no difficulty in getting them. Indeed, there are already some [illegible]rmacal houses which, without such a demand, are putting out modern, efficient therapeutic ammunition of the "ring the bell" kind, and trying to stimulate an intelligent interest in that kind of therapeutics. The internist seems a little hard to arouse, but he will wake up some day. He *must,* if he is to hold his own against the surgeon. And he *ought,* not simply to hold his own, but to go a long way toward wiping the surgeon off the map.

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## WANTED - PESSIMISTS

UNDER this title one of those little efficiency journals which business is putting out all over the country prints a clever little iconoclasm, showing that the popular idea of the connection between optimism and success is all wrong—that the pessimists are the successful men, just because of their pessimism. The writer points out that the financial king-pins are all pessimists; the Rockefellers, the Morgans, and the Carnegies. The optimists are the small fry who invest their money and play the stock market, blithely thinking that they can beat the big game. The hundreds and thousands of failures, in every walk of life, are the cheerful optimists who eternally hope that things may get better. The occasional successes are the pessimists who know they won't.

The meaning of the parable is not hard to get. Indeed, it is not a parable at all, but plain, direct truth. It is the pessimist who does things, in any line. The writer (be good enough to let this confidence go no further) is sometimes rash

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enough to do a little in the poetical line. Readers of the BRIEF need have no uneasiness—he never publishes it in medical journals. A friend to whom was given the priceless privilege of seeing one or two of his effusions, asked, not in a carping but an inquiring spirit, "Why is it that you poetry writers are always such a pessimistic lot? Why do you always write as if everything in the world were wrong?" The reply was, and is, that the man who sees deeply and truly, as a poet is supposed to see, cannot fail to be pessimistic. But in that pessimism is the truest optimism. The seer sees things all wrong because they are all wrong, and that is the first real step to getting them right. It is easy to be optimistic when one either cannot or will not see the evil. That is a specious, frothy, do-nothing kind of optimism. But the man who can and does see the long, long stretch of hard, thorny path between the now and the then, and is sad at the thought of it, yet believes, in spite of it, that the then will ultimately become the now, his is the pessimism which is most likely to do a good share toward clearing the way.

The same thing is true in science—in medical science, and medical practice. Nobody likes or wants the gloomy, hopeless prognostician, of course. To simply throw up one's hands and say, "It's no use," that is not pessimism, but rank cowardice, and nobody wants a coward for his physician. But, on the other hand, there is a cheerful-idiotic optimism which is, on the face of it, inane; a light and airy complacency which utterly fails to take the measure of the enemy's strength. A general of this kind neither inspires his cause with confidence, nor gets the most out of his available forces; and, as a result, he usually loses both the battle and his shoulder-straps. By the same token, that attitude of mind in a physician spells disaster both to his patient's life and to his professional reputation.

We are not arguing that the physician should always give a gloomy or even a doubtful prognosis. Indeed, we are not especially arguing the patient's side of the matter at all. What the doctor shall or shall not tell the patient of the prognosis is a question which each practitioner must decide for himself upon the circumstances of the case, although he will do well to bear in mind, as general guiding proposition, that the public very soon "get on to" the physician who habitually flosses over his prognoses for the sake of prophesying pleasant things. But, however this aspect of the matter may be, what we are emphasizing is the importance of the physician himself canvassing and appreciating all the real state of affairs. There is a maxim in medicine, as there is in law, about "giving the patient the benefit of a doubt." In medicine, however, it has a little different significance to that which it has in law. It means that, while the physician shall make the doubtful point a factor of hope and encouragement for the patient, he shall himself throw the doubtful balance the other way and count it as a certain point against him.

So we pass along to the medical profession, to the great army of practitioners in the field, the same message that our friend of the efficiency magazine gave out to the business world—Wanted, Pessimists. Wanted, men who take themselves and their patients seriously, but not necessarily tragically; who see all the obstacles, realize all the risks, appreciate all the chances of failure, measure all the difficulties, count all the cost, and then, in the face of this pessimistic estimate, can quietly and confidently grip the situation and wrest victory from the odds. These are the true optimists, the genuine fighters, the successful physicians.

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## "EMBALMED" TEACHINGS IN MEDICINE

IT is all right, of course, for medical science to be conservative; to be exceedingly cautious about abandoning time-honored and proven theories and practices, which have done good service for many years, for new and comparatively untried doctrines. That is perfectly proper in a science and a profession which concern themselves with human life and health. But we think this principle of conservatism hardly goes far enough to justify the embalming of defunct teachings and practices and parading the petrified mummies through the procession of the text books from year to year as though they formed an actual contingent of modern medicine. Mummies are very interesting, to be sure; but their place is in a museum, not in a living procession. Yet this is precisely what is done in the standard text books of medicine, and even in the text books of surgery, which, as we have intimated in another editorial, are as a rule considerably ahead of those on internal medicine. The pages of almost all the standard text books are loaded down with dead material—obsolete forms of treatment long since abandoned by progressive practitioners and in many cases known to be utterly valueless.

Only a month or two ago, for instance, a distinguished Chicago gynecologist—one of the comparatively few real gynecologists—in a most sensible article, exposed the dead-and-buried fallacy of the glycerine tampon which is still being exploited in the text books. This local procedure is almost universally recommended by the books, and employed by many of the readers of the books, although, as the gynecologist in question shrewdly points out, not by the writers of the books. Yet it is not only an obsolete form of treatment, quite out of step with our modern conceptions of gynecological pathology and therapeutics, but is a mischievous practice, productive in almost every case of chronic invalidism, both from chemical and mechanical causes.

The bromides are still gravely paraded in neurological text books as the *sine qua non* of the treatment of epilepsy, although every practicing neurologist knows that they are not only practically valueless to stop the seizures, but in every instance induce a condition of chronic bromism which makes the last state of that patient worse than the first. The painting of a furunculus with tincture of iodine is still recommended as a routine abortive procedure. We should like to hear from some practitioner who has ever been able to prevent the maturing of a boil by this means. Large doses of potassium iodide still form the stock text-book treatment of several respiratory and circulatory diseases, including asthma, myocarditis, cerebral hemorrhage, and arteriosclerosis; but we have yet to see or hear of a single case of any of these diseases where the iodides accomplished any other result than to upset the digestion and bring out a rash.

These are but a few common and conspicuous examples of the thing we are criticising. Why are these dead-and-gone obsessions still given a place in current medical teaching? Why are they not rather given a decent, respectful interment among the archives of the past and allowed to rest in peace? If it were simply a question of overloading the text books and either wasting good paper and ink, or else crowding out more vital stuff, that would be bad enough. But unfortunately they mislead the younger and less sophisticated practitioners, who are obliged to learn by tiresome, and sometimes costly, experience which are the living truths and which are mummies. And meanwhile the public suffers. Small wonder the Christian Scientists and other healing cults flourish. Let us, so to speak, have a medical housecleaning, and resolutely gather together and throw out, as we are obliged to do in our homes sometimes, all the old, useless truck that has been accumulating on our shelves and in our closets, which we have been fondly preserving, partly from a sentimental unwillingness to part with the old things, and partly from a foolish notion—which we know is foolish all the time we are entertaining it—that it may come in useful some day.

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# The Commission Fee and the Country Doctor.

Read before the Cass County Medical Society, August 18, 1911.

By G. H. GILMORE, M. D., Murray, Nebraska.

THE question of fee splitting has, as Dr. Gilmore says, been discussed in the medical press ad nauseam, and a good many trite things and a good many foolish things said on the subject. It now appears to be getting into the lay press, and it would seem as if the time had come for the profession to settle the question once and for all. Dr. Gilmore takes a very sensible view of the entire matter, a view, indeed, quite similar to that which we have more than once expressed editorially in this journal. The gist of his contention is that the best way to resolve the situation is for the general practitioner to quit acting as procurer for the specialists, and to assert his position as the prime adviser of the patient, to whom the specialist is but an emergency aid. This rehabilitation of the family physician will quickly adjust the matter of fees as between him and the specialist.

Having held to some hard and fast rules of ethics in the practice of medicine for nearly two decades, their moral value has never been questioned. One of the rules within the sacred code blindly followed pertains to the so-called commission or split-fee evil.

The profession have read an annual rehash on the subject of this "great evil" *ad nauseum*. Addison says of any question, "Much might be said on both sides." There must be some just grounds for fee division or it would not be practiced by men high up in the profession.

Specialists, in writing on this subject, have tried to arrive at a solution without a fee *division*. Can we not arrive at a more satisfactory solution with a fee division that will be equitable and ethical to all?

Let me serve some cold facts, in the first person, without garnish.

To start with, let me ask how much better education has the specialist than his ragged brother, the country doctor? Not one whit. His general literary education, his medical education and his practical training is just as good. The specialist medical understanding runs narrow and it may run deep. The country doctor's training is as broad as humanity, and he can run as deep as time and inclination may permit.

Now, if the sum total of medical training, experience and equipment are on a par, why the princely fee of the specialist and the pauper's alms of the country doctor? Further, in a year's time, who renders the most service to humanity? If the country doctor, then is not the laborer worthy of his hire?

What prompts the country doctor to seek a fee division with the specialist? Has not the country doctor built the specialist up to his own tearing down? The profession has warped the public mind to an unjust valuation of the services of the specialist, to the detriment of the country doctor. It is the country doctor who holds the specialist upon a ladder where he may pick his hat full of big, round, red apples, and at the bottom the prop, the country doctor, picks up his leavings—a wormy core. Let the general practitioner turn against the specialist and where is he? His ladder would topple and fall.

Another question: Is it money without earning it that the country doctor asks for? How much in a given case has the country doctor earned and how much has the specialist earned? In ninety cases

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out of every hundred taken the specialist the country doctor has made a correct diagnosis, or as nearly correct as the specialist can make himself. That being the case, the country specialist takes his case to the metropolitan human mechanic.

Still another question: Has this question been agitated for a purely ethical viewpoint or has it a taint of money? Is it not the specialists who have worn this subject threadbare? And why? Listen to this fact: There are specialists in our metropolis who are laying up more dollars each year than the entire medical fraternity of this county. This money invested in dairy farms, farm lands, office buildings, etc., brings an income each year that exceeds your annual earnings.

Further, why are some specialists strongest ethically on the commission evil? Is it wrong to accuse one absent of financial greed?

To illustrate, let me give you a few case reports gathered from the fraternity.

Case I. A specialist in our metropolis, ultra ethical on the "commission evil," operated on a moribund millionaire, charged $7,000 when he knew there was no show of recovery. How does this compare with the split-fee sin?

Case II. Another specialist ultra ethical on the "great evil" operated on one of our own country doctors, a dearly beloved patriarch of our profession, who had seen service in the defense of our country, and who had spent the vigor of his life upon the frontier of our state. At the side of the operating table stood two stalwart sons, men who had chosen the profession of their father, and at their side a grandson who had followed in the footsteps of his forefathers, all to assist in relieving this noble man of our profession. This ultra-ethical specialist who has blown his brazen bazoo for fair play in the commission evil charged these sons $150 and they paid it without a murmur. Ye gods! Is it ethics or is it money? Kind specialist of the mono-ethical brand, take that football out of your eye before you try to pluck a split-fee commission out of thine brother's eye. Don't get red in the face gagging at a gnat and then swallow a whole herd of camels with a relish. You may be sincere, but—we should not judge.

Case III. On a cold, stormy night in the winter of 1908, when the snow was deep upon the highways, a telephone message called a doctor eight miles distance into the country. With scoop shovel, hammer and wire cutters, the doctor and his driver made the trip through snow drifts and hedge fences in eight hours. The case required immediate operation. Eight more hours of struggle and the patient was landed at the station. The patient was taken to the hospital and operated on in thirty-five minutes. "Old Doc" received thirty dollars for forty-eight hours' labor, skill in diagnosis and medical judgment, which was far better than that of the specialist, and the lily-white hand of the specialist received $150 for thirty-five minutes of mechanical skill. If this is not a graft far greater than the commission evil, will not some brother please speak up?

Case IV, and last case. Last summer, after spending a night with a case, the country doctor took the patient to a hospital, where she was operated upon. The fee was $125. The country doctor had delivered to this specialist during one year about $1,500 in cases. On the street car from the hospital the specialist inadvertently made the remark that he had received $800 more that month than any preceding month in twenty years as a specialist. This country doctor borrowed three dollars from a friend on the street, bought himself a thirty-five cent dinner and took the night train for home, with "eight hundred more" ringing in his ears. "Eight hundred more!"

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he thought with big, black, club-shaped exclamation marks. He had worked as hard as any of his country brethren, but never had took even eight hundred without the "more" appendix. His average monthly earnings were not half this for the year. With "eight hundred more, eight hundred more," beating synchronously with the click of the car wheels on the rails upon his tired and weary brain, he fell asleep, not in a Pullman car but in a common car seat. At his side sat a grim and grizzled beggar. This may be justice, but it is the justice that acquits the raven and condemns other birds.

The hue and cry of the specialist is that the practice of medicine is becoming commercialized. It never became commercialized until the advent of the specialist with his exaggerated fees, and the more money hungry this part of the profession has become the more commercialized has become the practice of medicine.

As was stated in the beginning of this paper, that if both branches of the profession are on a par in every particular, then is not the country doctor entitled to as many pleasures of life as the specialist? Is he not entitled to as much self-improvement by travel? Is not his family entitled to as many good things of this life as the specialist? Money gives these, and a just sharing of fees would give a just sharing of the pleasures and necessities. The specialist travels over Europe in specializing. He views the castle-clad crags of old Rhine, he tickles his retina with a blue Italian summer scene, he quaffs the fermented vintage of France, all on money obtained at the sacrifice of a class of brothers he prefers to call country cousins. It matters not about the money question. He has taken a course abroad, no matter how narrow the course may be, and the lay are ready to receive him with open arms as soon as his terse news sketch announces his return.

I cannot say that the *secret* fee division appeals to me, neither does the nefarious methods of the specialist who fleeces the patient of his last cent, leaving the shabby man from the country who has done 75 per cent of the work on the case empty handed. The expense at the hospital has been hard on the family. "Old Doc will be easy on us," the family say, and in the great majority of cases he is compelled to do so.

Great stress is placed upon the word *secret* by all writers on this subject when discussing their secret fee and secret commission to cast a shadow of dishonesty over the transaction. Kind specialist, how about your consultations? Are they not in secret? Do you tell the family the whole truth and nothing but the truth? Do you ever hedge or evade? Do you ever defend a brother in error or give your guarded prognosis? The lay will permit of this method of consultation, and have you ever heard them object to the commission evil? A farmer on a village street surmised that his family doctor had been besmirched by this "great evil." Another farmer tried to twit him about it. "Hope he did. He ought to had part of that fee," was the quick rejoinder.

"Peddling cases," "unnecessary operations," "drumming up cases," are phrases shot at us in each annual batch of hackneyed stuff. There are two specialists in the city who will retain the country doctor's patient after his return home and treat by mail, to where there is one country doctor who is guilty of the misdemeanor mentioned. Neither are worthy of the name of physician.

First solution to this question: Let it be known by the patient that *our* fee will be a stipulated sum agreed upon by the country doctor and the specialist, this fee to cover the time and expense of the country doctor and his share of responsibility; the specialist to adjust his fee on an equitable basis. Let this

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be above board and in the open, and the most critical cannot object.

Another solution to this question, though less feasible, might prove even more disastrous to the specialist than the "great evil" itself. Let the country doctors stand together and assist one another. We can now operate successfully on 75 per cent of the cases sent to the hospitals. With a little training, all this work can be done at home by the home physicians. In this we can replenish our bank accounts. The pleasures of life will not then fall to our bleached brother in his city office, but will go where they justly belong. Do this, country doctors, and the wail of a generation of specialists will be heard in the dark forest of despair. Today they are a derelict, and sooner or later will be driven upon the shoal of greed.

* * *

## NITROUS OXIDE AND OXYGEN ANESTHETIC.

Coburn, in the *American Journal of Surgery,* declares that there is much less shock and depression with nitrous oxide-oxygen than with ether or chloroform. The patient regains consciousness within a minute or two after the anesthetic is withdrawn, and, being always less depressed, must consequently recover from the effects of the operation sooner and better in every case than when more depressing anesthetic agents are used. Moreover, nitrous oxide-oxygen causes much less nausea and vomiting than ether, consequently the patient is much more comfortable after this form of anesthesia. Few physicians realize how much importance the patient attaches to the post-anesthetic discomfort and depression of ether, or how much he appreciates its prevention through the use of a pleasant narcotizing agent, such as nitrous oxide-oxygen.

In diabetes, nitrous oxide-oxygen is always strongly indicated, regardless of the character or length of the operation. The vastly superior results in this condition as regards the ultimate safety of the patient are undoubtedly due to the combined non-irritating, non-depressing, shock-preventing, immunity-preserving qualities of this anesthetic.

Nitrous oxide-oxygen is much less toxic *per se* than ether or chloroform, is much more rapidly eliminated from the system, and causes no degeneration, either through its early or remote effects, of the cells of the blood, liver or kidneys, as do the other anesthetics.

It has been shown conclusively in the laboratory that chloroform and ether markedly impair phagocytosis and produce anemia, thereby impeding Nature's effort to repel bacterial invasion and to repair injured tissue. And allow me to repeat, this is a definite and constant effect, no matter how carefully the anesthetic is administered, for sufficient quantity of either narcotic circulating through the blood to produce anesthesia will destroy hemoglobin, reduce the volume of the blood, materially alter the constituents of the cells through their fat solvent action and greatly reduce the functional activity of the phagocytes.

Nitrous oxide-oxygen, on the other hand, does not impair phagocytic action, and therefore does not lower the patient's natural resisting power against infection. Would you not criticize one of your colleagues if, in a case of opium poisoning, he were to administer, for any reason whatsoever, more opiates? Most certainly you would. Yet the situation seems exactly parallel where a patient with infection is operated and chloroform or ether is used as the anesthetic. Both of these agents lower the patient's natural resisting powers against infection in a definite and demonstrable manner, and consequently increase the very toxemia from which the patient is already suffering.

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# Advances In Proctology.

## AMERICAN PROCTOLOGIC SOCIETY.

THIRTEENTH ANNUAL MEETING, HELD AT LOS ANGELES, CAL., JUNE 26 AND 27, 1911.

THE American Proctologic Society is not a very large organizaton, nor does it make much noise or fuss. But, in a quiet way, its members do excellent work in a line of medicine and surgery that is all too little explored or exploited; and once every year it meets in convention and presents the results of its observations and experiences. These results are always of great value to the general practitioner, who is in most instances obliged to be his own specialist in rectal diseases and related troubles. The reports presented at this society are invariably of the most practical character, touching the clinical side of the subject, and we believe that our readers will derive real and valuable help in their every-day practice from a re-presentation of these papers.

### Surgical Anatomy and Mechanism of the Colon.

BY GRANVILLE S. HANES, M. D., OF LOUISVILLE, KY.

Until comparatively recent years diseases of the colon and sigmoid, and the surgical anatomy of each, received but scant attention. Recently, however, much valuable information upon this subject has been developed. Robert Coleman Kemp in his work on Diseases of the Stomach and Intestines says that Dr. J. M. Mathews was the first to call attention to sigmoiditis and diverticulitis of the sigmoid.

The entire length of the large bowel in situ is found to be much shorter than when it is dissected from its attachments. An ordinary thirty-inch colon tube has sufficient length to extend around the lumen of the large bowel to the cecum. While this has not been done in the living individual it has been done in the cadaver, and radiographs of the same are on record.

It is almost universally believed that ordinary flexible colon tubes can be manipulated in such a way as to traverse the entire course of the large bowel around to the cecum. It has been proven by a number of investigators that such an achievement is impossible in the normal bowel. The average length of the sigmoid is about eighteen inches, and this being a floating portion of the large gut it is almost impossible for an instrument to pass beyond the middle half of the sigmoid. Should such be possible and the tube enter the descending colon it would be a physical impossibility for it to pass either the acute angle at the splenic flexure or the hepatic flexure. The failure of instruments to pass high into the bowel has been demonstrated by X-ray pictures.

Dr. Hanes demonstrated the difficulty in passing any instrument through the hepatic and splenic flexures by introducing a thirty-inch, No. 20, French, soft rubber, catheter into the caput coli in an old appendicostomy case. He failed by any kind of manipulation to pass the catheter through these flexures. The tube was allowed to remain in the head of the colon for twenty-four hours with the hope that peristalsis would carry it around, but this failed. After manipulating the second time three hours later four inches of the catheter appeared through the anal opening.

He forced bismuth solution into the head of the colon till the wall of the gut was thoroughly distended and then Dr. E. Bruce made a skiograph. No regurgitation into the ileum occurred. This experiment was repeated a number of times with the results as above given. If the ileo-cecal valve allows no reflow into

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the ileum then exceedingly large amounts of water injected into the bowel are retained in the large gut, and not a part of the amount passed into the small bowel as is supposed by some.

In an old appendicostomy case, with the patient on the left side, coal-oil was poured into a colon tube that had been introduced three inches into the rectum. In six and a half minutes the oil was flowing out of the appendicostomy opening. The amount employed was thirty ounces. This clearly demonstrates that liquids will easily pass around the entire colon without flowing through a tube. The point is also made that coal-oil is much less irritating to the mucosa than plain water or ordinary aqueous solutions.

The capacity of the large bowel in situ was measured by temporarily closing the opening of an appendicostomy case and allowing coal-oil to flow into the rectum as long as the patient could tolerate it. At a later date the same experiment was made by allowing oil to flow into the head of the colon. About the same amount of oil was received in each case. After making the same experiments in other cases it was decided that the average large bowel had a capacity, varying between fifty and sixty-four ounces.

The capacity of the rectum was ascertained by inverting the patient and placing a colpeurynter at the junction of the sigmoid and rectum, just within the sigmoid. The colpeurynter was then distended with air until no fluid could pass into the sigmoid. Coal-oil was allowed to flow into the rectum till no more could be received. It was then drawn off with a catheter and the average amount was found to be between fourteen and seventeen ounces.

He insists that the Inverted Position (Hanes) is much to be preferred by both patient and operator when any kind of illuminating instruments are to be employed in the rectum or sigmoid.

### Have We an Ideal Operation for Internal Hemorrhoids? A New Hemorrhoidal Clamp.

By A. B. Cooke, M. D., of Nashville, Tenn.

An ideal operation for internal hemorrhoids must embody the five following surgical principles and precepts:

1. Complete hemostasis.
2. Immediate closure of the operative wounds.
3. Preservation of the function of the parts.
4. Permanency of cure.
5. Due consideration of the factors of safety, simplicity of technic, time required for recovery, and the amount of post-operative discomfort.

The ligature operation violates principle 2.

The clamp and cautery operation falls short with reference to the fourth class of principles in each of its several points.

The Whitehead operation violates principles 1, 3 and 5, and is, moreover, an unnecessary and unjustifiable procedure.

The operation by means of Earl's clamp is a modification of the Whitehead method and a vast improvement upon it, but is apt, likewise, to violate principle 3.

Pennington's enucleation operation is open to criticism under classes 1 and 5 of the surgical principles. In spite of its ingeniousness, it is dangerous.

The Clamp and Suture operation described by the author fulfills all conditions and is entitled to be considered the most nearly ideal of any yet devised.

A new hemorrhoidal clamp designed to facilitate the last named operation was presented and strongly recommended.

* * * * *

A Symposium on Constipation embracing seven different parts of subject was presented as follows:

### Etiology of Constipation.

By Horace Heath, M. D., of Denver, Colo.

Dr. Heath mentioned two groups—miscellaneous and mechanical. Under miscellaneous, the author regarded heredity as unimportant, but attention was called

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to the faulty instruction of children in certain families. He stated that the constipation of infancy was due to undeveloped muscles; and of old age, to inactivity and atonicity.

Under mechanical causes he considered,—diet, sedentary life, abnormal positions, angulations, coloptosis, and hypertrophy of the rectal valves.

The predisposing diseases mentioned were colitis, stricture, proctitis, fissure, hemorrhoids, fistula, polypi, enlarged prostate, and malignant growths.

* * * * *

**Physiology of Constipation.**

By Samuel T. Earle, M. D., of Baltimore, Md.

In reviewing the Physiology of Constipation in the symposium read before the American Proctologic Society, June, 1911, Earle calls attention to the sensibility of the alimentary canal in connection with its bearing on constipation. It has been shown that the stomach and intestines are quite insensitive to tactile and thermal stimuli, but that the esophagus and anal canal are sensitive. The whole of the alimentary canal is, however, sensitive to distension, which produces at first discomfort and subsequently pain. The rectum appears to be more sensitive than the rest of the intestines to distension, so that a large fecal mass produces more discomfort when lodged in the rectum than in any other situation. As a result of this, the normal accumulation of feces in the pelvic colon is unaccompanied by any discomfort, whereas,—the entry of feces into the rectum at once produces a sensation, which acts as a warning that defecation is necessary. The discomfort produced by the presence of a large mass of feces in the rectum is partly due to the pressure it exerts on the upper extremity of the sensitive anal canal. Prolonged retention of feces in the rectum leads to a blunting of its sensibility, so that comparatively little local discomfort is present in most cases of confirmed constipation. But in acute cases or cases of recent origin, in which the rectum is distended with feces much discomfort and occasionally severe pain is experienced. On the other hand, even a very large accumulation in the pelvic colon produces little or no discomfort in the intestine itself.

A large fecal accumulation in the rectum presses directly upon the anterior primary divisions of the third, fourth and fifth sacral nerve routes, as they emerge from the sacral foramina. It may therefore lead to neuralgic pain referred to the sacrococcygeal region. It is liable to cause suffering more from its constant presence than its severity; it is often as severe when the patient lies down as when he takes exercise, but some relief follows flexion of the lumbar spine. The muscles of the buttocks and back of the thigh, which receive a small part of their sensory and motor supply from the third sacral nerve route, may be the seat of similar pain. Neuralgic pain or parasthesia, in the form of tingling or a sensation of heat or cold may occur, in the course of the sciatic nerve, in the back of the thigh, and occasionally the sensation of cramp in the calf is produced. Pain is also occasionally felt in the hip-joint, it receives part of its nerve supply from the third sacral nerve. The roots which supply the muscles of the front of the thigh, are situated out of reach of the distended rectum, so that in the exceptional cases in which pain is produced by constipation in this situation, it must be due to pressure exerted by a fecal mass in the iliac colon on the anterior crural nerve; and is accordingly only observed on the left side.

That these neuralgic pains are probably due to the direct presence of a large and hard mass of feces, on the sacral nerve-routes is shown by their instantaneous disappearance on completely evacuating the rectum by anemata, a form of treatment which was already advocated for sciatica by Columnius of Naples at the end of the eighteenth century.

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Possibly the erections and seminal emissions, and the frequency of micturition and nocturnal incontinence, which occasionally result from large fecal accumulations in the rectum, are due to direct irritation of the third and fourth sacral nerves, and are not reflex in nature. The spasm of the sphincter ani and levator ani muscles, which has already been described as an occasional complication of the fecal impaction in the rectum, which occurs in constipation, may perhaps be in part due to pressure on the fourth sacral nerve routes.

Neuralgia of the testicles in men and dysmenorrhea in women are sometimes increased by the direct pressure in the rectum on the nervous supply of the testicles and uterus respectively.—Arthur F. Fertz, on Constipation.

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**Bacteriology and Urinary Findings of Constipation.**

By John L. Jelks, M. D., of Memphis, Tenn.

The author advances no new theories but expresses his views of the importance of both chemical and microscopical investigation in connection with clinical proctology, and the value of these examinations in cases of atonic constipation.

He refers to the importance of either finding, or eliminating, the presence of intestinal parasites, that are known to produce lesions in the intestinal coats and ports of entry of bacteria or their toxins. He expresses the belief that the destruction wrought to the sub-mucous structures, the infiltration of plastic material and the contracting, distorting, scarred portion of the bowel, as also the consequent destruction of, and interference with the secreting glands, their ducts and the nerve supply may become important factors in the atonic condition of some patients.

The author believes it is important to make microscopic examinations in all cases of this character,—both of the crude and washed specimens, and of scrapings from the intestinal wall or from any lesion found in it. He also examines the urine chemically, and microscopically, believing this important, owing to the relationship and association of diabetes, kidney insufficiency and diseases of the kidney with cases of atonic constipation.

These examinations of the urine aid in determining the proper course of treatment, especially is this true when indicanuria, casts and sometimes traces of albumen, indicate the vicarious overwork of the tired and irritated kidneys, as also the intestinal fermentation and coprostatic auto-intoxication, which results in some cases.

The author refers to the importance also of examination of the stomach contents after test meals have been given as these may furnish in some cases a clue to etiologic factors.

Blood examinations he finds quite important in determining the amount of opsonic resistance as also for finding infections in the blood, which matters by lowering the vitality may become factors in the atonic conditions which were being discussed.

* * * * *

**Pathology and Diagnosis of Constipation**

By Wm. M. Beach, M. D., of Pittsburg, Pa.

Pathology of constipation is naturally considered under two general heads, namely:

1. Stasis due to altered secretions;
2. Stasis due to mechanical obstruction.

The first may be the result of neuroses, and acute fermentative indigestion, or a bacillary infection. The anerobes may attack the contents of the bowel or the gut wall itself, leading to varying degrees of inflammation in the colon,—as ulceration, hypertrophic and atrophic catarrh. The colon impaired functionally or traumatically leads to stasis and consecutive inhibition of the fecal excursion. Such impairment further disturbs the physio-

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logic lines of defense against the auto-intoxications,—as

(a) the intestinal mucosa, itself;

(b) the liver, and

(c) the antitoxic glands.

Collateral with these phenomena in constipation, are such factors as cholelithiasis, hypochlorhydria, cholongitis and appendicitis, as altered secretions incident to coprostasis.

Mechanical obstructions to be reckoned with include,—

1. Entroptosis or Glenard's disease;
2. Gastroptosis;
3. Dilatation of the colon;
4. Certain extra-mural and intra-mural sources of obstruction,—as pelvic tumors and displacements, nephroptosis, enlarged glands, intussusception, malignant diseases, etc.;
5. Acute angulation at the recto-sigmoid junction, hypertrophy of O'Beirne's sphincter, and stiff rectal valves;
6. Disease in the anal canal.

Diagnosis resolves itself into an analysis of the above condition; to differentiate acute or chronic obstruction and the ordinary functions stasis which may also be accompanied by the various forms of colitis.

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**Sequelae of Constipation, Including Auto-Intoxication.**

By Alfred J. Zobel, M. D., of San Francisco, Cal.

In this paper the writer mentions many of those conditions which seem to have their origin in chronic constipation with auto-intoxication. He states that experimental evidence has not as yet demonstrated that they actually do so, but close observation and clinical experience tend strongly to confirm the theory.

He writes that while all constipated individuals do not necessarily suffer from those symptoms ascribed to auto-intoxication, yet in his experience most patients with auto-toxic symptoms are constipated. This may be without their knowledge, and they often deny in good faith that they are so; but proctoscopic examination generally proves the sigmoid and rectum to be loaded with fecal matter.

A report is given of the proctoscopic observations made on a number of cases of hypertrophic arthritis. In almost every instance the lower bowel was found filled with a fecal mass, although most of the patients positively stated that they had had an evacuation within an hour or two previous to the time of examination. Thorough colonic flushings invariably brought about relief from pain, and in time marked improvement in their general condition.

These observations are in line with the theory advanced by various authors that arthritis deformans may be due to intestinal auto-intoxication.

Mention is made of the various muscular, arthritic, and neuralgic pains caused by absorption of toxins from the bowel. These are often misunderstood, and treatment instituted for rheumatism.

Congestion, irritation, and various disturbances, both functional and organic, of the uterus, tubes and ovaries in the female; the vesicles, urethra, and prostate in the male; and the bladder in both; may result from chronic constipation. This is due both to the proximity of these organs to the lower bowel and to their close physiological relationship.

It is noted that albuminuria may arise from intestinal stasis, and mention is made of the opinion advanced by various clinicians that a nephritis may even be caused thereby.

The role of constipation with auto-intoxication as casual factors of epilepsy, neurasthenia, and various mental conditions, as claimed by certain well known and competent observers, is stated here without comment.

The influence of these conditions on the heart, blood-vessels, and the blood; and its effects on the eye, ear, nose and throat are dilated on in this paper, and in support of these statements quotations are culled from the literature that has

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appeared on this subject during the past five years.

The writer further briefly mentions a few more of those conditions that are supposed to arise from chronic constipation with auto-intoxication, and concludes by agreeing with the trite observation of Boardman Reed that, "when we except the exanthems, malaria, syphilis, tuberculosis, and the diseases caused by traumatisms, by metallic poisons, and by a few other toxic agents or infections from without, practically all the remaining maladies which afflict us and cut short our lives are now directly or indirectly traceable to auto-intoxication."

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**Non-Surgical Treatment of Constipation.**

By Dwight H. Murray, M. D., of Syracuse, N. Y.

Dr. Murray stated that chronic constipation and its results was one of the worst of the foes to a healthful human race.

He had never known any medication to cure cases of constipation. As primary causes of all cases of constipation he considered CARELESSNESS, IGNORANCE, and LAZINESS to be of first importance. The whole medical profession should teach their clientele how to care for themselves, and to train their children in order that constipation could be eliminated by educational and prophylactic methods.

Medicines for the use of constipated people have increased until their number is almost countless. Advertisements which extol particular cathartics exploited by this or that pharmacist, are well nigh bewildering.

He makes the claim that all cathartics finally leave those who use them worse than before. He does not entirely interdict the use of drugs, as there are cases where they must be used, but almost wholly for temporary relief. He says that a mistaken notion exists in the minds of the laity that the feces is composed largely of debris of food. This, however, furnishes only a comparatively small portion of the fecal mass, the larger portion being deposited in the large intestine as the ash resulting from the products of metabolism.

He mentions various exercises, massage, deep breathing, climbing, rowing, electricity, etc., as being helpful in the treatment and cure of these cases.

Sigmoid injections of pure olive oil, castor oil or medical paraffine oil were recommended as aids in the treatment.

He said that hours could be spent over the various drugs and methods in detail —after it all we would be obliged to say. that eternal vigilence as to regularity on the part of the patient must be exercised or a cure would not result.

The key note of his paper is, education and regularity as to periodicity of the first daily stool. Finally he believed that the whole profession had a profound duty to perform for mankind in an educational way for emancipating the race from this insidious foe.

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**The Surgical Treatment of Chronic Constipation.**

By Louis J. Hirschman, M. D., of Detroit, Mich.

Constipation is divided into two great classes; the one class being due to a lack of functional activity, i. e., dietetic error, improper habit, neural or tropic influences. The other class, which some of us have been pleased to designate as obstipation includes all cases whose impaired activity is due to mechanical interference with the normal peristaltic movements and expulsive function of the bowel.

Obstipation, or obstructive constipation may be caused by;

(1) The presence of any foreign body, occlusion, contracture, hypertrophy or accumulation in the intestinal canal.

(2) Displacements, acute angulations, distensions, neoplasms, adhesions or compressions of the bowel.

(3) Developmental defects and congenital deviations from normal.

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In as much as the surgical treatment of constitpation, due to easily recognized local conditions, is obvious, they are dismissed with mere mention. Coloptotic constipation represents such a large percentage of cases of mechanical constipation that its discussion involves the most important field of surgery in the treatment of constipation. All patients with ptotic colons are not constipated, nor do all constipated patients suffer from coloptosis. There must be in addition to ptosis of the cecum, transverse or sigmoidal colons, a condition of functional inactivity due to atony of the bowel muscle.

Suspensions of ptotic colons by means of fixation by adhesions to the abdominal wall are unnatural and interfere with peristalsis. Restoration should be accomplished by shortening the natural support,—the mesentery. Lateral anastamoses between the most dependent loops of ptotic bowel is sometimes indicated. Above all, massage, both abdominal and internal rectal, is of primary importance in restoring function, and should be used along with either dietary or hygienic measures to restore bowel function.

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### Cancer of the Rectum.

By J. Rawson Pennington, M. D., of Chicago, Ill.

I take it we are all agreed as to the increasing frequency of cancer. At least is seems to me no other conclusion can be drawn from the following figures: According to the 12th U. S. census, cancer appears to have increased 12.1 deaths per 100,000 population in the previous decade. In Great Britain, so we learn from the work of Roger Williams, the deaths from cancer increased from 177 per million in 1840 to 885 per million living in 1905. Williams points out that while the population barely doubled from 1850 to 1905, the mortality from cancer increased more than six fold. Nor is the increase confined to the United States and Europe, it holds good for Japan, India and even for uncivilized countries. In short cancer is one of the several diseases which is apparently increasing, by leaps and bounds, in spite of our boasted progress in Medicine, Surgery and Hygiene. Apart from the increased prevalence, the present death rate from malignant diseases is something dreadful to contemplate. Our anxiety in regard to malignant disease of the rectum is pardonable when we reflect that a good proportion of cancers involve this region. Williams found that 9.6 per cent in males and 5.3 per cent in females were located in the rectum. Is there anything that can be done to check this foe? The writer believes there is, and that this Society may be made a powerful factor for good in such a crusade. In Germany a similar crusade has been started against cancer of the uterus by Winters, agitating the subject both among the profession and the laity, it is estimated that the number of cases of inoperable cancer of this organ has been reduced over 30 per cent as a result of calling attention to the early symptoms. Of the 2914 cases of rectal cancer in the male referred to by Williams 2592 patients were over 45 years of age and 2180 of the 2533 female patients. In the male sex again the average age, at which the onset was noted, was 49.7 years, the minimum being 16.75 and the maximum 74; while the female sex the average was 50.4 years with a minimum 21.8 and a maximum of 88 years. This brings me to the crux of my argument, that every person who has reached that so called "cancerous age" should be examined periodically for evidence of commencing carcinoma not necessarily of the rectum alone but in the female for example, of the uterus also.

In 120 resections of the rectum for malignant disease W. J. Mayo observes: "It is an unfortunate fact that, in the majority, cancer of the rectum is not regognized in time to obtain a radical cure." I said a moment ago that cancer in the beginning is a local disease. This granted, then early and thorough re-

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moval must lead to a cure. It has been shown that a large proportion of malignant growths originate in scar tissue. In cancer of the stomach, for example, the Mayos found that no less than 62% showed evidences of a previous ulcer. In rectal cancer patients frequently give a history of previous operations on the part. Does the cancer occur in the scar left from an operation for hemorrhoids done by one of the commoner methods—ligature, clamp and cautery, or some other technic leaving much scar tissue and sometimes stricture? May it not be occasionally engrafted on the scar following the usual incision method of operating for fistula? Here is a suggestion for us in our own work, secure smooth healing by resorting only to such procedures as leave the minimum of cicatricial tissue, hence, the least possible nidus for possible mischief in the future. With the co-operation of the public it seems to me we should learn much about cancer in the early stages. To educate the public we must—as has been well said—"organize, systematize, deputize, energize, supervise and economize." The field is broad and the opportunity is at hand. Shall we grasp it?

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**Malformation of Rectum and Anus, With Report of Case.**

By Donly C. Hawley, A. B., M. D., of Burlington, Vt.

The fact of modern embryology explain a majority, but not all developmental defects of the rectum and anus.

M. B., Female, age 4 weeks, came under my observation in April, 1910. She had an imperforate anus, the rectum opening into vagina in the upper half of the recto-vaginal septum, opening one-half by one-eighth inch in size, the longer diameter transverse, was evidently supplied with a sphincter, as the child had three or four well controlled movements daily. Anal depression was present and the vulva and vagina were normal, except as noted. The presence of uterus was normal or otherwise not demonstrated. There was no distension of rectum, no impulse and no prominence in perineum. The child was well nourished and otherwise normal. Operative interference postponed. The child is at present well, and is 13 months old and weighs 22 pounds.

While this defect is sometimes seen, many cases reported, as atresia ani vaginalis, are no doubt in reality imperforate anal canal with vulvar outlet, a malformation admittedly of common occurrence.

Cases in which intestine opens well up in the vagina are not accounted for on embryologic grounds, the two structures being embryologically dissimilar and independent.

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**Pruritus Ani, With Report of Cases.**

By Donly C. Hawley, A. B., M. D., of Burlington, Vt.

In this discussion I do not refer to cases due to intestinal parasites, errors in diet, etc., in which the pruritus is relieved by proper attention to the causative condition, nor so much to the symptoms as to the pathologic condition of the skin and nerve endings, which condition is pathognomonic.

The nearly constant local cause of pruritus ani is abrasion and ulceration of the anal canal, accompanied by blind sinuses underneath or fissures in the mucocutaneous lining.

Further, some cases are associated with chronic proctitis, which may be a factor in producing or increasing the anal abrasions or ulcerations.

The treatment I have adopted is as follows:

With the patient well anesthetized, the anal canal is dilated, and the ulceration, together with the sinuses and fissures, are thoroughly cauterized with the Paquelin cautery, and also the entire area of chronic dermal inflammation.

My aim is to destroy ulcerated areas, the thickened and altered skin and the

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pathologic condition of the terminal nerve fibres.

CASE I. S. H. E., aet. 62, came under my observation June, 1908. He had suffered with rectal troubles for 45 years. Twenty years ago he was operated on for fissure or fistula—was not certain which. He has had almost intolerable pruritus for eight years, and for the past year it has been so constant and unbearable, especially at night, that he has become a nervous wreck, and has lost 40 pounds in flesh and has been unable to continue his business.

Diagnosis:—Chronic pruritus ani. The skin was inflamed, soddened and thickened over a large area about the anus, with many deep cracks, and four or five ulcerations and abrasions in anal canal.

Treatment as outlined. Result, cure and no return up to present time.

CASE II. W. A., Male. aet. 38. History of pain in rectum for 20 years, and of severe and intolerable pruritus.

Diagnosis:—Chronic pruritus ani.

There was a large ulceration in anal canal and three or four blind sinuses, with an area of white brittle and infiltrated skin with large cracks about anus.

Operation, same as in Case No. 1. Result, cure.

Other cases less severe have been operated upon during the past three years, with satisfactory results.

The treatment outlined is not new nor original, having been advocated by Mr. W. Mitchell Banks, and practiced by Mr. Fred C. Wallis.

Ball's operation is designed to render anesthetic the skin over the undercut area.

The operation described accomplishes the same end and besides destroys lesions in anal canal.

The former operation has resulted in extensive sloughing. To the latter no such danger attaches.

## A Paper; Intestinal Stricture Following Ileo-Rectostomy. Report of a Case Was Read.

By Frank C. Yeomans, M. D., of New York City. N. Y.

J. X., a man 46 years of age, was always strong and well but suffered from severe constipation of many years standing. In October, 1909, an anterior sigmoidopexy was proposed for "prolapse of the sigmoid." Temporary relief followed, but three months later "peritonitis" developed. The same surgeon operated again, freed numerous adhesions, divided the ileum just proximal to the colon, closed the abnormal end and implanted the oral end of the ileum into the rectum. Relief of the constipation was prompt but when he first consulted Dr. Yeomans, in July, 1910, it had returned in an obstinate form with all the symptoms of a marked auto-toxemia superadded.

The proctoscope passed easily, but no opening could be discovered in the rectum or the sigmoid. An excellent radiograph, by Dr. L. G. Cole, proved the colon and sigmoid to be unobstructed.

Concluding that the feces, following the path of least resistance, were accumulating in the colon, Dr. Yeomans did an appendicostomy at the N. Y. Polyclinic Hospital, December 16, 1910. Irrigations through the appendix relieved all symptoms for ten weeks. Constipation and toxemia then returned, however, and he performed an exploratory laparotomy March 14th, 1911. The ileum ran down into the left side of the pelvis and was lost in a mass of dense adhesions. A broad lateral anastomosis was made between the ileum, just above the adhesions, and the sigmoid. The patient reacted well from the operation, but developed a double pneumonia, 18 hours later, to which he succumbed on the fifth day. The urine was suppressed the last 24 hours of his life. The bowels moved on the second day, and, thereafter, three or four times daily. At the autopsy no peritonitis was found. The specimen re-

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moved, consisting of ileum, sigmoid, and rectum intact, showed perfect union of the recent lateral ileo-sigmoidostomy. The remarkable feature of the old end-to-side ileo-rectostomy was that the opening was so constructed that it would scarcely admit a 16 F. catheter and physiologically amounted to a stricture.

The noteworthy features of this case were:

1. Reverse peristalsis of the colon, evidenced by the large quantities of feces expelled by the irrigations through the appendicostomy.

2. The radiograph was valuable in demonstrating a patent sigmoid and colon, thereby proving that the obstruction was in the small intestine.

3. Failure of the proctoscope to reveal the site of the opening does not discredit the diagnostic value of that instrument but shows the extreme degree of contraction of the opening.

4. The many actions of the bowel signify clearly that the physiological function would have been permanently restored had the patient survived the pneumonia. The practical lesson derived from a study of the case is that lateral anastomosis is superior to end-to-side union, especially in the presence of inflammation.

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**Syphilis of the Ano-Rectal Region.**

By Lewis H. Adler, Jr., M. D., of Philadelphia, Pa.

The author related the history of two cases of syphilis in which no outward visible effects of the patient's grave condition existed, except about the anus. In both instances, the anus was surrounded by syphilitic condylomata; the parts were bathed in a fetid sero-purulent discharge and the patients' mouths were affected with mucous patches. In one case the patient was markedly improved by the use of salvarsan and the other one improved under the ordinary mercurial treatment, but disappeared from observation before a cure could be affected.

The writer then took up the consideration of the usual manifestations of the disease as affecting the localities under consideration, stating that the primary lesion,—always a chancre,—occurs about the anal region much more frequently than is usually supposed. That chancre of the rectum proper, in this country, is a very rare occurrence. Where sodomy and other unnatural vices are practiced, infection may, and, possibly does occur with greater frequency. That females are oftener affected than males and while the occurrence of the initial lesion about the anus or within the rectum of men, is almost positive evidence of the practice of sodomy; in women, the possibility should be remembered of the infection of these parts arising through contact with the male organ, or from the vaginal discharges.

That the diagnosis of all doubtful cases of syphilis can now be definitely determined when the patient's blood shows a positive Wasserman reaction and by finding the presence of *sphirocheta pallida*.

Attention was called to the fact that cases of ano-rectal syphilis develop the usual symptoms of the disease as when it affects other parts of the body, and, next to the mouth and throat, the anus is the most frequent site for mucous patches.

Attention was called to the heriditary on congenital form of the disease; and, among the tertiary lesions, the following principal varieties were enumerated:—Gummata; destructive ulceration; stricture; ano-rectal syphiloma, and, proliferating proctitis.

The article concluded with a brief consideration of the treatment of the disease in which attention was directed to the necessity of care being exercised in looking after the hygiene in all its phases; that the constitutional treatment of the disease should not be commenced until a positive diagnosis is established; that as no one form of mercury, or any

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one of the various methods of its administrations may be employed successfully in all cases, the individual requirements of each person should be the guide.

Ehrlich's remedy,—salvarsan,—had in several instances been employed with excellent results, but the author would not depend upon its employment alone, believing that mercury should supplement its use.

In the use of salvarsan, it was advised that no one treat patients with it, except those specially trained in its preparation and administration.

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**Foreign Bodies in the Rectum.**

By T. L. Hazzard, M. D., of Pittsburg, Pa.

The paper consisted mostly of a recital of four recent cases of foreign bodies in the rectum. Two were in children, in which the substances were accidentally swallowed, and the others were adults who introduced the bodies directly into the rectum through some perversity:—

Case 1. Baby girl, two years old. Referred for dysentery of three months' duration. The chief symptoms being bloody stools, mucus and tenesmus. No digital or other local examination had previously been made. Examination with the little finger showed the presence of something lying across the bowel, low down. A guarded pair of scissors was introduced and this body was easily cut in half and removed. It proved to be a match, or at least, nearly two-thirds of one. Although the ends of this match were firmly fixed in the sides of the intestine, no abscess followed. Recovery was rapid and uneventful.

Case 2. Boy, a little older than the first case. The symptoms, conditions and procedure were the same as the preceding case but the foreign body was a bone from a frog's leg.

These cases show the necessity for rectal examinations. In one case a bacterial microscopical test had been made but was rather misleading than otherwise.

Case 3. Self introduction into the rectum of a prescription bottle, a "Baltimore oval" 3 oz. The mouth was upward. After considerable trouble it was removed by means of a blunt hook. It had been in the bowel for three days. No anesthetic necessary. The case progressed without any untoward incident. He gave no reason for his action, and no questions were asked, as he would not have told the truth.

Case 4. Adult, aged 45. Had been a cow-puncher. At present has no occupation. Came to Allegheny General Hospital. Examination showed the presence of a very thin beer glass, 2 inches wide, at the top, and 3½ inches tall. Sphincters contracted. No bleeding and but little discomfort. In attempting to remove it, it was broken. After it was extracted there was considerable bleeding from the rectum. He developed pelvic peritonitis and a rather large tumor developed in the left iliac region. This passed away and he was discharged in about three weeks, not altogether well of the pelvic pains.

General treatment in all cases was rest in bed, with frequent washing of the bowel with a 1% solution of creoline and normal salt.

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**The Limitations of the Use and the Methods of Employing Local Anesthesia in Rectal Surgery.**

By Lewis H. Adler, Jr., M. D., of Philadelphia, Pa.

The author quoting from a recent article of a distinguished proctologist states:—"Patients seriously object to a general anesthetic and because of this and the fact that most minor ano-rectal operations can be painlessly performed under local anesthesia induced by sterile water, or a one-eighth of one per cent eucaine solution, I have discarded general narcosis in about eighty per cent of my rectal operations."

In taking exception to this general statement he questions the wisdom of sending it broadcast and advocating a

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method which in the hands of one not particularly skilled in rectal work would in his opinion only lead to disaster.

He calls attention to the water logging of the tissues, when sufficient anesthetic be used, whether cocaine, eucaine, sterile water, or other agents and to the subsequent retarding of the recovery of the patient and the danger of hemorrhage from allowing patients to be about on their feet, citing a case which proved conclusively the force of his arguments.

The author claimed a thorough understanding of the underlying conditions can rarely be made without the aid of general anesthesia. The latter when administered by a competent anesthetizer is not attended with any more danger or risk than the indiscriminate employment of local anesthesia.

He calls attention to the fact that it is essential to remove the anesthetic when the sphincter is divulsed, as deep inspiration thus induced would cause too much of the drug to be inhaled suddenly, and might cause alarming or fatal results.

Rectal diseases, which may be treated under local anesthesia he considers under two divisions:—(1) Those admitting of office treatment; (2) those requiring treatment at home or in a hospital.

In the opinion of the author external piles or other excrescences around the anal region, some fissures-in-ano, and abscesses (of not too large an extent), are the only affections coming within the range of operations which can with propriety be performed in the office under local anesthesia. He warns the operator that trivial fistula, often have diverticulae and are not readily discoverable except under general anesthesia.

Under the second heading he speaks of internal colostomy and internal hemorrhoids and warns the operator that the temperament of the patient must always be taken into account. Highly nervous patients will not stand manipulation of the intestines and the abdominal muscles are apt to be rigid.

The author mentions the different drugs used in local anesthesia, the vibratory method of Hirschman, the methods used in getting the parts anesthetized and the after treatment.

### THE TRAGEDY OF THE KISS.

Sanitary science, says the *Dietetic and Hygienic Gazette,* has divested "the old oaken bucket" of its former romance and is prying suspiciously into other realms that have heretofore been sacred to poetry and sentiment. Even the holy communion cup has been subjected to inspection and investigation, and people are learning that the public health is as sacred as the sacraments of religion.

But the sacraments of friendship are too strongly intrenched in our manners and customs to be easily dislodged by anything short of a social convulsion. One of the inalienable rights of friends, secured to us by centuries of tradition, is the indisputable right of kissing and being kissed. We have driven from our courts the old custom of "kissing the book" because of its evident peril to public health, but to refuse the kiss of a friend is to deny our friendship—it is a sign of repudiation. Even those who practice kissing as a mere formality are apt to regard it as quite indispensable when friend greets friend, and so the traveling public is treated to frequent exhibitions of this custom in all places and at all times, the old and the young, the washed and the unwashed, the pure and the impure, all mingling and exchanging this symbol of attachment, going the rounds *ad nauseam.* Then there is the kiss of privilege, the first kiss—or one of its many successors—often assumed or granted with no thought of its possible consequences. This is the kiss of the contagious diseases have been transmitted by lip contact and are liable to be transmitted in that manner. Kissing is perfectly safe only when there is no possibility of exposure to infection.

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# CURRENT MEDICAL LITERATURE.

## BIER'S TREATMENT IN SKIN DISEASES.

SIBLEY, in the *American Journal of Dermatology,* gives it as his opinion that practically all chronic forms of skin diseases are benefited by the hyperemic treatment before applying local remedies. The action of ointments and lotions is considerably facilitated if a local congestion of the part is produced before they are applied. This local hyperemia probably acts in two ways. In the first place, by producing a passive congestion, it increases the blood-supply, and so improves the nutrition of the part, and at the same time encourages the removal of deleterious products by the venous blood. In the second place, this local hyperemia assists in the local action of the drugs when they are afterward applied.

Of the cases so far treated, it would appear that the most satisfactory results have been obtained in psoriasis, especially in some very old-standing cases in which the lesions were very chronic and localized. We so often meet with cases of this complaint of many years' standing, where some very persistent lesions are limited to a small area, such as the knees or elbows, which resist all treatment and which is the class of cases specially benefited by this method.

Some cases of lupus vulgaris have shown rapid improvement—in fact, from some recent observations the hyperemic method showed earlier and much more satisfactory results than the X-rays had done. Acne, both diffuse and local, reacted well, but these cases required a considerably greater amount of congestion and more frequently repeated treatments, both general to a large affected area, and afterward local to the individual and more persistent comedones and pustules.

The immediate result of the local treatment is to produce a venous congestion of the skin, which increases the action of the sudoriferous glands, and gives rise to a varying degree of perspiration. This varies with the nature of the lesion and the degree of hyperemia produced. In some conditions only an almost imperceptible amount of sweating results, perhaps just sufficient to produce a slight haziness on the sides of the cupping-glass without a visible sweat on the skin. In others, such as many eczemas and seborrheas, a profuse perspiration is quickly produced, and after a few minutes the whole part is bathed in sweat. In other cases the ordinary sweat is replaced by a serous exudation. In some instances of non-ulcerated lupus, which as a class perspire very freely under the treatment, a blood-stained serum exuded after a short time, and for this reason the cases require to be very carefully treated and only for very short periods at a time, one minute or so being usually sufficient.

He believes that future research into the different reactions of various skin lesions under hyperemia will be of considerable scientific value in assisting and defining the similarities or differences between some of the less easily distinguished skin diseases. These physiological or pathological reactions of various lesions may not only become a help to the pathologist but also of considerable aid to the diagnosis of some, at present, rather ill-defined and readily confused morbid states.

## THE EYE IN PREGNANCY.

Shute, in the *New York Medical Journal,* presents the following views:

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1. Albuminuric retinitis may exist for weeks, and even months, without pregnant women complaining of impairment of vision.

2. The retinitis can exist for some time independently of, as well as in association with, symptoms of renal disease; also independently of, as well as in association with, alburminuria.

3. The presence of this retinal inflammation indicates a far-advanced condition of the toxemia of pregnancy, or of that manifestation of toxemia known as the kidney of pregnancy.

4. The presence of this disease, in a larger number of cases than is realized, indicates a very grave prognosis as to the life of the patient, for the kidney of pregnancy may be followed by chronic interstitial nephritis.

5. As long as the albuminuric retinitis lasts there is danger of vision being irretrievably ruined at any moment and in any month.

6. The ophthalmoscope is the only means by which the earlier and relatively much less serious stages of toxemic retinal involvement can be detected; also it is the only means by which we may know that albuminuric retinitis even exists.

7. Should the earlier stages of retinal involvement be detected, as they can, by the use of the ophthalmoscope, such remedial procedures can be adopted as may prevent the development of so sinister a disease as albuminuric retinitis; and, also, the necessity of inducing premature labor, in order to safeguard vision, may be obviated.

8. When urinalyses are negative, pathological arterial tension and pathological leucocytosis when present are invaluable symptoms of the toxemia of pregnancy. If increased arterial tension is persistent, as indicated by an abnormally accentuated second sound of the heart in association with a tense and wiry pulse, or as revealed by the sphygmomanometer, an ophthalmoscopic examination of the eyes ought by all means to be made at stated intervals.

9. It is as much the duty of the obstetrician to be practically familiar with the use of the ophthalmoscope as it is that of the neurologist.

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## VACCINE TREATMENT OF BOILS IN CHILDREN.

C. L. McDonald writes on this subject in *Archives of Pediatrics*. He says:

The brilliant results in the treatment of furunculosis by bacterial vaccines more than anything else is responsible for the widespread interest this form of therapy has commanded in the past three or four years. The results from its use in this infection in the thousands of cases treated by various men throughout the world have been so uniformly good that it now stands at the head of the list in the therapeutics of this painful, stubborn infection.

While its value has been so definitely established in the treatment of adults suffering with furunculosis, I have seen little in the literature as to its use in infants suffering with the same infection.

In the past three years I have had the opportunity of treating 28 cases in children varying in age from two months to three years, including those with a few scattered furuncles here and there to cases in which they were so large and numerous that it was difficult to find a spot not infected for the passage of the hypodermic needle.

The staphylococcus aureus and albus were the causative organisms in all cases. The average initial dose was 25,000,000 staphylococci. Some cases received as high as 150,000,000 without untoward results. The average number of inoculations per patient were three, spaced seven days apart. In 3 cases there was slight redness and swelling at the point of inoculation, which subsided in two or three days. It was not an uncommon occurrence for a fresh crop of furuncles,

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usually small in size, to appear two or three days after the first inoculation. This, however, did not follow subsequent inoculations.

The most interesting case among my service was a girl one year old, who after a rather protracted attack of enteritis became covered with small pustules, probably the size of a pea, and apparently harmless. The physician in charge, after correcting the feeding, treated the local infection by the usual means of evacuating the pus, and the internal administration of calcium sulphide. Despite his persistent efforts, the number of pustules increased both in size and number. At the time I saw the child, one month after the beginning of the infection, the entire body was covered with furuncles about the size of a small hickory nut, many of which had been opened and were discharging freely. Its respirations were shallow and rapid probably due to a septic pneumonia. Its temperature was 102. A culture was taken from one of the furuncles, and the infecting organism found to be a staphylococcus aureus. A vaccine was prepared and on the following day the patient was inoculated with 25,000,000 of the dead organisms. I might add that, owing to the number of furuncles, it was difficult to find a spot not infected for the introduction of the hypodermic needle. Seven days later the furuncles that had been opened had stopped discharging and were beginning to heal. The breathing had become better and the child's temperature was normal. After four subsequent inoculations, spaced seven days apart, the last of which was 100,000,000 dead staphylococci, the furuncles had all disappeared, the respirations were normal, and the child made an uneventful recovery.

These extreme cases I know are not common, but the results produced by only four inoculations serve well to illustrate what could be accomplished in similar infections of a lesser degree by bacterial therapy.

Two years ago I had occasion to treat another interesting case in a young boy three years old, who had suffered with crops of furuncles on the neck, appearing about every two months since his second year. A vaccine of the causative organism, a staphylococcus aureus, was prepared and the child inoculated with 25,000,000. The existing crop of boils disappeared very promptly. The mother was then instructed to bring the child back once a month for an inoculation with the hope of preventing a recurrence. This plan was followed out for eight months and the child inoculated with 50,000,000 of the dead organism each time. During this period and since the child has had no furuncles. A similar experience with an adult prompted me to suggest this plan.

It is, of course, advisable to open all existing furuncles at the time therapeutic inoculations are begun. The rapidity with which they subside after an inoculation is really striking. Most of my cases were treated by a stock vaccine, prepared from a similar infection, in my laboratory.

## OPEN TREATMENT OF FRACTURES.

*Colorado Medicine* remarks that since Lane, in 1909, published the result of his open treatment of fractures, that method has attracted a great deal of attention. The details of his technique are probably well understood, however its value as a routine operative procedure has not yet been established.

Edward Martin, in a paper read before the American Surgical Society in Denver, discusses its value in the particular case of transverse fracture of the femur. He states that indications for the open operation in this case are failure "to accomplish adequate reduction, with or without the negative help of anæsthetics,

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failure to retain the fragments in proper position, even though they be so placed, and wounds of the soft parts leading to the seat of the break." The X-ray should be used in checking up results.

Time for intervention, he states, is as early as it is manifest that the good opposition cannot be obtained or maintained.

In experimental work he has shown that the ordinary Lane plates as obtained in shops, are weak at the screw hole next to the metal, and can be easily broken at this point. To obviate this difficulty he uses plates made of Vanadium steel. It is not necessary to have the screws penetrate both sides of the bone, as the holding power is sufficient if only long enough to penetrate one thickness of the cortex.

He finds useful forceps specially made for replacing bones, as well as the ordinary nickel plated plumers forceps, which can be obtained anywhere.

To accomplish a reduction in a case where there is considerable shortening, he employs a canvas band passed over the end of the bone, the ends carried down parallel to the axis of the leg, and attached to weights of one hundred pounds or over. The stretching will be accomplished in from three to ten minutes, and should be maintained until there is an actual lengthening of at least a quarter of an inch. He believes, contrary to what Lane has taught, that the union is not so prompt with plates, as without. Of course, the ultimate results are anatomically better than when the open method is not used.

In the discussion which followed the interesting point was brought up by Dr. Harris, that he has had good results in the use of plates in infected compound fractures, though of course in such cases plates must be renewed.

Whether this method of treatment of fractures should ever come to general use is extremely doubtful, for the reason that the technique necessary to success is very much more exacting than that necessary in the usual run of operations. This should be impressed upon the occasional operator.

The condition of the tissues is such from the nature of the case that resistance to germ infection is almost abolished. The introduction of a very small number of organisms is sufficient to cause suppuration. The edges of the skin should be covered by antiseptic gauze. Under no circumstances should even the gloved hand of the operator touch the wound. All manipulations should be made with the utmost gentleness, and only by the use of instruments. Only in this way can Lane's results be approached, and the patient spared the great danger of septic complications.

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## INTESTINAL TOXEMIA.

Mack, in the *Illinois Medical Journal,* says the most common type giving excellent results which has come under his observation is the neurasthenic. The mental picture of this type is decidedly characteristic. They frequently seek advice on account of some intestinal disturbance. There is extreme nervousness with marked depression and many forms of mental imaginings, varying from a slight disturbance almost to the borderline of insanity. Indeed some might properly be termed insane. For instance, one case which the author had under his care was that of a man who was positive that he would die of tuberculosis. He had consulted eleven other physicians, the first of whom had told him that he had tuberculosis. Up to that time he had only been depressed following an attack of grippe. When the author saw him he had been unable to attend to his business for five months and the idea was so deeply rooted it seemed almost impossible to eradicate it, yet in two weeks this man was able to go to the office for an hour or two daily and in four weeks was active the entire day, and at present is controlling one of the

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large wholesale establishments in Chicago, and all that was done was to relieve the intestinal toxemia.

The intestinal trouble is generally constipation, occasionally diarrhea or diarrhea alternating with constipation. The depression is just as marked when diarrhea is present as when constipation is present.

Headaches, especially temporal, are very frequent accompaniments. Insomnia is often very annoying. There is restlessness and inability to concentrate the mind. Belching, bloating and pyrosis are present in most cases. Flatulence is excessive in most cases and is often increased after treatment had begun. The patient complains of nausea and occasionally of vomiting.

Difficulty in deglutition is another type. The author recently dismissed a patient who for months was treated by a throat specialist without results. After satisfying himself that no mechanical obstruction existed, and taking into consideration her extreme neurotic condition, the author directed attention to the bowel with the result above stated.

The appetite varies. In some cases it remains unimpaired, in others it is poor, while still others are capricious, ravenous at times, preceding headaches occasionally and disappearing entirely at others.

Drowsiness is present in almost every case, as is also dizziness. Ringing in the ears with vertigo simulating Meniere's disease is not at all uncommon.

Cardiovascular sluggishness manifests itself in cold hands and cold feet. The author has a patient at the present time whose hands perspire profusely under the least excitement.

A weakened muscular tone is generally found. It ranges from a slight weakness to an actual pain, especially of the leg muscles on walking.

The rheumatic or gouty pains in the muscles and joints give these patients much inconvenience, one of the common seats of trouble being directly over the sciatic notch. Lumbago is not at all uncommon.

In women menstrual disturbances appear in many cases. Loss of weight varying from a few pounds up to 15 or 20, or even 30 or 35 pounds, is not uncommon. The author has two patients at the present time, one of whom lost 30 and the other about 33 pounds in the last few months.

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## EMPTYING THE STOMACH.

The *British Medical Journal* says it has been noted that ptosed stomachs with ptosis of the pylorus sometimes manifest considerable slackening in the avacuation of their contents without any anatomical or clinical causes other than the ptosis to explain it. This retardation in the process of emptying may exist in stomachs which fill normally, and in which peristalsis is normal. Chilaiditi, of Vienna, has been drawing the attention of the Societe de Radiologie Medicale de Paris (Bull. et mem., No. 19, 1910) to some considerations which, in his opinion, may not only explain this condition but also help to clear up the pathology of some affections of the duodenum, including ulcer. He insists particularly upon the point that for the proper discharge of the normal functions of the orifice of the stomach it is essential that there should be a condition of acidification above the pylorus and alkalinization below. Normally, the stomach contents being acidified by the gastric juice, the pylorus opens to discharge a portion of them, which passes into the duodenum. The pylorus is closed again immediately, and is not reopened until the alkalinization of the duodenal contents has taken place. But an abnormal anatomical configuration of the gastroduodenal tract interferes with the rhythm of the process.

In a ptosed stomach with ptosis of the pylorus, the greater part of the chyme propelled into the upper portion of the

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duodenum—the ultra-pyloric portion, which is considerably in evidence after the contraction of evacuation, and which has been named by Holzknecht the "duodenal bulb"—may be arrested in that bulb for a longer time than normally. This arrest is due to the fact that the ptosed stomach and pylorus carry away the mobile portion of the duodenum, while the fixed portion, which commences as the summit of the subhepatic angle, remains in place, resulting in a protraction of the duodenal bulb. Further, owing to the fixity of that angle and the lowered pylorus the chyme remains in the bulb, and is not immediately propelled by the contractions into the middle part of the duodenum. The upright instead of horizontal position of the bulb, and the lack of tonicity in its walls, have also to be reckoned with. Thus there is a delay in alkalinization by the bile and pancreatic juice, and consequently the pylorus remains closed in spite of the preparation and sufficient acidification of the stomachal chyme above. The eventual emptying of the bulb may take place because of the action, tardy though it be, of the alkaline juice of the glands of Brunner, or because the muscles of the portion have not lost the whole of their tonicity, or because massage and movement and abdominal compression have assisted the passage of the aliment.

The author believes that the very satisfactory results which have been noted in accelerating the stomach evacuation by making the patient lie on the right side for four hours after the principal meal are really due to a movement of these duodenal contents which permits the reopening of the pylorus. The weight of the chyme when the patient is in such a position assists its progress. Massage, also, although it should never be increased with the idea of forcing the pylorus, may have good results when directed upon the duodenum. He emphasizes the point that ulcer of the duodenum may arise as a result of this special duodenal configuration. It is the first or justa-pyloric portion of the duodenum, rendered anatomically abnormal by elongation and atony, which holds the stagnant acidified chyme, and certain of the acids may readily have a serious effect upon its altered coating. This needs to be considered in relation to the fact that, in 95 per cent of the cases of duodenal ulcer, the ulcer occupies a position in the first portion of the duodenum, and in the majority it is found in the immediate neighborhood of the pylorus.

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## ACUTE HEMORRHAGIC PANCREATITIS.

E. Monnier, in the *Wiener klin. Wochensch.*, gives a graphic description of this condition. The patients, apparently healthy and usually corpulent, experience suddenly more or less severe pain in the epigastrium. This is often described as a cramp and may become so intense as to lead to collapse or syncope, and is but slightly relieved by large doses of morphin. The pain usually extends around the left side or to the left shoulder or into the left lower abdominal region, although occasionally it may be localized in the right side or even in the region of the appendix. At the same time vomiting and nausea ensue, the abdomen becomes more and more distended, and the intestines are soon paralyzed, with resulting symptoms of ileus and peritonitis; the face often assumes a peculiar yellowish-brown color; the vomiting is mostly of biliary character; the pulse is accelerated, there is a moderate increase of temperature, and marked restlessness and general debility exist. Frequently the presence of an exudate in the abdominal cavity can be distinctly determined by percussion. The condition speedily changes for the worse, as shown by the heart action and pulse, and the patient dies with symptoms of peritonitis and ileus, death in severe cases occurring in the course of two or three days. In the

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differential diagnosis the following points are of importance: In the first stage of hemorrhagic pancreatitis the abdominal walls are easily compressible and the reflex rigidity of perforation peritonitis is absent. The peculiar facial appearance, obstinate pain in the epigastrium, and usually higher temperature are unlike the symptoms met with in intestinal occlusion, and, moreover, it is possible to inject several liters of water into the intestine. On the other hand, the diagnosis from an atypical appendicitis is difficult, although the pain in the latter is much less intense and persistent and the cramp-like character is wanting. The condition also closely resembles an attack of cholecystitis or gallstone colic, but the pain is more prolonged and the rapid deterioration of the general state points to an involvement of the pancreas. Laparotomy and drainage are imperative in acute pancreatitis, and even if the patient has survived the acute stage operation should be resorted to because the abscess formation is progressive and the longer the delay the worse the prognosis.

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## DIAGNOSIS OF DUODENAL ULCER.

Horace Reed, in the *Journal of the Oklahoma State Medical Association,* declares that there are few diseases which heretofore have offered more difficulties in the way of diagnosis than has duodenal ulcer. This has been the result of faulty text book teaching. Since we have come to have a better understanding of the symptomatology we marvel that we have allowed ourselves to be kept so long in error. The fact is that there are few diseases in which the symptoms appear in such regular order. The patient usually begins his history by saying that for several years he has had more or less stomach trouble. The period may be as short as six months or it may cover practically a lifetime.

There are at first fairly long periods of complete, or relatively complete, absence of symptoms. As time goes on these periods become shorter until finally the patient reaches that stage where these intervals represent only a period of tolerance. Early in the history the patient recalls that the attacks occurred more frequently in the fall of the year, and that during the spring and summer months little or no symptoms were present. Later, however, the attacks would come on with little provocation, such as slight indiscretion in diet or exposure to sudden temperature changes.

Just as typical as the history outlined is the description of the individual attack. There is a burning, boring sensation in the epigastric region. Usually nausea, rarely vomiting. Belching of sour, scalding material. Appetite at first variable, later ravenous. Taking food relieves pain from two to four hours. The more chronic cases, observing this fact, may have formed the habit of carrying food in their pockets to be eaten when the pain comes on. Bowels are invariably irregular, constipation, or constipation alternating with diarrhœa. The majority of cases will report having had melanotic stools. Such in brief is the history obtained in uncomplicated duodenal ulcer.

There is little to be ascertained from the physical examination. There is usually tenderness on deep pressure, and consequently some muscular rigidity in the right epigastric region. The well-trained clinician may be able to palpate a large indurated ulcer of the duodenum. The stomach is usually slightly dilated. Test meal shows atony. Hcl. is nearly always diminished and organic acids are present. Total acidity not above normal, usually below.

Since gastric and duodenal ulcers frequently coexist, it naturally follows that a confusion of symptoms will render diagnosis difficult. From a surgical standpoint it only needs to be shown that there is a duodenal ulcer.

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# THE DOCTOR HIMSELF.

## MASTERS AND MASTER PRINCIPLES IN MEDICINE.

W. B. KONKLE, in the *Medical Record,* writing of the ancient fathers of medicine and their influence, points out that in Egypt medicine was very closely bound to priestcraft, its teaching being conducted in the magnificent sacerdotal schools. Physicians, being at the same time priests, were subject to all the strict regulations of habit and life prescribed for the latter, and were imbued with their sublime philosophy and noble precepts. Here is an exhortation to a student—"Give not thyself to idleness, or thou shalt be smartly chastised; abandon not thy heart to pleasure, or thou wilt let thy books slip out of thy hands; practice conversation; discuss with those who are wiser than thyself; do the works of an elevated man. Neglect not thy books; do not take a dislike to them."

We must not pass by the great Greek schools of medicine, the schools of the Asclepiads, chiefly because to them belonged the so-called "Hippocratic oath." It is quite certainly known that Hippocrates was not the author of this famous formula—better had it been called the oath of the Asclepiads. Upon completing their course at Cyrene, or Crotona or Cnidos or Cos, or elsewhere, the pupils were obliged to take this oath. Hippocrates himself had doubtless subscribed to it, and as surely imposed it upon his own disciples. It is so well known that quotation may be omitted. The clause referring to the seduction of males, free and enslaved, would reflect discredit and shame upon the guild did its expediency not proceed from the fact that pederasty and sodomy had fastened themselves like a cancer upon lovely Greece, the imputation of their taint clinging to the memories of even Sophocles and Euripides, and the apology for their existence persisting as a foul blot on the immortal pages of Plato. Noble oath of the Asclepiads! Upward to the stars soars the name of medicine on the pinions of the vow, "With purity and with holiness I will pass my life and practice my art."

And now we come to Hippocrates, *our* Hippocrates, our lord and master, protagonist and paragon of physicians. Hear him—"Art is long and life is short, opportunity fleeting, experience deceptive and judgment difficult. The physician is a servant, not a teacher of nature. He must know what his predecessors have known if he does not wish to deceive both himself and others. The physician should be neat as to his dress, serious in his manners. He should be moderate in all his actions, chaste and reserved in the intercourse which he is obliged to have with the other sex. He should be neither envious nor unjust, nor love dishonest gain. He should not be a great talker, but it is necessary, nevertheless, that he should be ready to reply to everybody with mildness. He should also be modest, sober, patient, prompt to do his whole duty without anxiety; pious without going so far as superstition, conducting himself with propriety in his profession and in all the actions of his life. In a word, he should be a good man, and have at the same time the prudence and industry requisite for the efficient exercise of his art. As to the fee owed to the doctor, he should act in this connection with probity and humanity, having regard for the ability or inability of the patient to recompense him more or less liberally." A delightful Grecism is Hippocrates' short definition of a physician—"An upright man instructed in the art of healing."

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Crossing the time equator of our Western peoples, Galen looms into view, a colossal figure, to whom appertained the undisputed autocracy of medicine for a thousand years and longer. Renouard says of him that, "for erudition, subtilty of reasoning, universality of information, he yields to Aristotle alone, over whom otherwise he bears away the palm by elegance, purity and force of style." Galen's father was the good and learned Nicon, who imparted to the son these lessons—"Do not give yourself up rashly and blindly to any sect. Sects are implacable despots; to accept their thraldom is to take away from one's actions and thought all liberty. Be just, temperafe, courageous, prudent; flee immoderate desires; seek the truth before all else; remain in everything consistent with thyself, immovable in thy principles, firm in thy resolutions." Concerning himself, Galen says this—"Neither the abuse of men, nor their injustices, nor the loss of honors can alter the peace of my soul. I have saved myself that degree of humiliation which I should suffer were such incidents able to divert my mind from the path of reason. It concerns me little to please men. I am affected neither by the flatteries of some, nor by the censure of others. I do not think of securing the good graces of all people any more than of possessing all things." Says Galen again: "The good physician should practice with disinterestedness, not for money, but for the good of humanity. It is not possible to covet riches, and at the same time to cultivate worthily medicine, that art so noble; if a man devote himself ardently to one, he will neglect certainly the other. How could he love labor who besots himself, who gorges himself with various foods and delivers himself to the pleasures of Venus, who, to put it in a word, is the slave of his belly and his wanton inclinations! It remains then established that the true physician is the friend of temperance, and that he is, at the same time, the disciple of truth."

The Arabian period presents a group of highly illustrious philosopher-physicians. Of these one of the most eminent by reason of his talents and attainments was Rhazes, the cithern-player. From him is this upon the choice of a physician: "Inform yourself with care upon the antecedents of the man to whom you design confiding that which is the most dear to you in the world—namely, your health, your life, the health and life of your wife and children. If this man dissipates his time in frivolous distractions, in pleasure parties; if he cultivates with too much curiosity the arts foreign to his profession, as music, poetry; more important still, if he is addicted to wine, to debauchery, beware of committing into such hands a deposit so precious. He alone merits your confidence who, having opportunely applied himself to the study of medicine, has frequented able masters and seen much of the sick; who joins to the assiduous reading of good authors his personal observations. For it is impossible to see all, to test everything one's self; and the knowledge, the experience of a single individual, compared with the knowledge, with the experience of all men and of all ages, resembles a thin thread of water placed beside a great river."

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## THE MAN AT THE FRONT.

In the preface of Osler's monumental work on *Modern Medicine* there occurs these sensible and inspiring words:

"It cannot be too often or too forcibly brought home to us that the hope of the profession is with the men who do its daily work in general practice. Our labors are in vain—all the manifold contributions of science, the incessant researches into the complex problems of life, normal and perverted, the profound and far-reaching conclusions of the thinkers and originators—all these are

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sounding brass and tinkling cymbals unless they result in making men better able to fight the battle against disease, better equipped for their ministry of healing. Gradually, often insensibly, the practical advances of the laboratory and of the hospital reach the men with whom, after all, rests the final testing of all our efforts. The work in practical sanitation, the last word in the prevention of disease, the carrying out new methods of treatment, the exchange of the old accoutrements for the new weapons and the new methods of warfare, these rest with the rank and file of the profession who make effective and translate into practice the new knowledge."



## THE NIHILIST AND THE INSURGENT.

The *Therapeutic Digest* discusses these terms, which are applied to those opposing forces whose conflicting influences render it difficult, if not impossible, for medicine to become an exact science, or show that progress, which one would naturally look for and expect to find, in a profession devoted to the alleviation of suffering and in conserving the health and the life of mankind. On the one hand, we have the spirit of Nihilism in therapeutics, a phrase at once far reaching and expressive to the initiated or meaningless to the careless and indifferent. It implies a state of mind which disregards the lessons of experience and ignores the accumulated wisdom and the written records of the "Fathers of Medicine."

The Nihilist is defined as a disbeliever in any permanent improvement in the social condition or progress in any branch of human activity. His "cure-all" and most potent remedy is the destruction of established conditions, and at the same time he offers no substitute.

The Nihilist is found in every walk of life. He is opposed to political, social and economic order; disbelieves in the restrictions thrown around the public, through laws established for its protection. In medicine he discredits the permanent value of remedies in the treatment of disease, discredits their efficiency and without anchorage of any kind—acts upon impulse—and charges the result, whether favorable or otherwise, *to chance.*

The Insurgent is also in evidence in every community, but whether posing before the public on the rostrum—in the halls of congress—or in private life, is an exponent of progress in the respect that he closely analyzes established law and custom, detects flaws and imperfections and brings them to light—but, unlike the Nihilist, *does not rest at this point.*

The Insurgent does not tear down with destruction as his object. He breaks away from the old moorings for reasons which he considers sufficient in themselves, with the object of substituting in their place advanced ideas and improved conditions, in the enjoyment of which all may share.

And between these two extremes there is the old established order looked upon with reverence by the many—with contempt by the few, but with a fervent prayer from all that a change may be effected to the end that, out of the ruins of the old, there may be an awakening in the benefits of which all may participate.

Applying these thoughts to the medical situation, we have on one side a class of physicians contending that the established order in existence for fifty years or more is practically perfect, and they cannot be made to believe that there is anything "new under the sun," or that the practice of medicine as a healing art can be advanced in its efficiency. Then we have a class of medical men including a very considerable number of reputable physicians, who disbelieve in the potency of remedial agents generally, but rest their faith and their chances of professional success upon sanitary and

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hygienic measures and other individual fads and fancies; and no amount of recorded experience will induce them to test the new—any more than they are disposed to place their confidence in the old.

The Insurgent in medicine partakes of the progressive spirit of the twentieth century and is always scanning the medical horizon to grasp and appropriate any new or advanced idea from whatever direction or whatever source it may come.

The Insurgent does not condemn all systems of practice with old remedies, because of their antiquity, but he investigates their claims and appropriates what is good in them with the same clearness of perception as would be given to the claims of new or rare remedial agents brought to his attention.

The Insurgent in medicine is liberal, broad-minded and opposed to that tendency on the part of a large number of physicians, many of them of great prominence in the profession, who arrogate to themselves the ability and the right not only to select remedies and curative methods for their own guidance but assume to establish laws and regulations, limiting the profession generally to those remedies only which have passed their censorship and have received the sign of *their* approbation.

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## THE DAILY VACATION.

F. W. Fitzpatrick is a queer kind of a man, says the *Healthy Home*. He is convinced that the common method of tearing one's self to pieces with hard work during eleven months of the year in order to get time and opportunity for a vacation the twelfth month is all wrong. He declares that he never goes for a protracted vacation, and yet he is always fresh, unwearied and in the pink of condition. His method is to take a vacation two hours every day. His vacation is as regular as eating and sleeping, and as much a part of his daily life. Then, one day in seven, he makes a break and gets away for a change of scene.

This is how he tells of his method: "Now, circumstances are such that my life generally is most enjoyable. I live in the country. My daily two hours are spent on a fine saddle-horse or in playing tennis. My business takes me into other cities at times and gives me all the change necessary; occasionally I go on a long motor tour or indulge in other expensive amusements. But all that has been secured by hard work and years of thrift. I went through pretty nearly all the struggle and grind and up-hill work that usually fall to the lot of a young man while I was 'getting there.' That work seemed easier by reason of the daily vacation. My hours were so long that I had to get up earlier to enjoy it—a habit that has stuck; for I am still up with the sun. I could not afford a saddle-horse, but I could go on a good, quick walk, or chop wood, or do something that was not expensive and yet absolutely different from my regular work, physical exercise the while completely throwing off all thought of business or of anything unpleasant—another habit that has stuck, and has given a brighter complexion to life generally.

"Then, wherever I was, I always organized a bit of a walking club. Off we would go once a week, four or five of us, rain or shine, for a good tramp. If we lived in a large city, we would 'car' it to the outskirts, then get into the country, into the green fields, enjoy a frolic, then home, a good dinner and a jolly evening with the family. We would vary the trips by occasionally getting the wives and babies together, hiring a 'bus, or otherwise getting off for a picnic in the country, for a ball game, a weekly vacation, or something to look forward to—not for a whole year, but for only six days, further shortened by the two hours' vacation every day. There's nothing like it. Try it."

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### THE ESSENTIALS OF SERVICE.

There are at least two things that we must be possessed of in order to be of service, and one of them is the Spirit of Enthusiasm. An enthusiasm that is born of a deep-seated confidence, and directed by faith and good common sense, for the men, in every walk of life, who have gained the good opinion of humanity in general, are the men who have been enthusiastic in their work. I believe that we should carry our enthusiasm into our thoughts, and into our work, no matter what we are working at, if a drayman or carrying the hod, carry that enthusiasm into your work, into your life, into your patriotism, into the age in which you live, and you will see that it will tend to drive out of your life all trace of a pessimistic feeling.

The next thought and idea that must possess our minds is a positive faith in something. A negative faith in a negative creed will never bring a man character. Every man must believe in something that is going to amount to anything in business or in any vocation in life. The men and women who are building up the world today are the ones who believe in something, and because of that positive faith they are ready to lend a helping hand, to stand by and give that encouragement that their fellowmen need.

Just one other thought: If we are to be best fitted to help our fellowmen we must understand the value of an ideal. When you come to consider the difference between the noble and the ignoble career, you will find that the success of one man is due to his faith in his ideal, and the failure of the other is his lack of faith, and that if you keep up your faith and work towards your ideal you will never have time to be pessimistic.

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### HIS FUNERAL SERMON.

One of the hardest things a minister is called upon to do is to deliver an address at the funeral of a man for whom there is really nothing good to be said. Such moments of embarrassment do occasionally arise. How one parson tactfully coped with the situation is thus reported:

The very worst man in a mining camp not notorious for its piety died. The fellow had been terribly bad. If he lacked anything of total depravity, none could recall any evidence of it. He had corrupted the camp in every way possible, had been brutal and debauched and debased in every way known to mankind. When he died there was a quandary as to what to do at his funeral. He had been shot down in his boots in defense of the very decency of the camp. A nonresident minister was sent for, and was told the awful truth about the deceased.

"Didn't he have any good point?" asked the minister.

"Not one."

"Wasn't he even kind to a child some time?"

"Never."

The minister was lost in thought a while. Then he asked:

"When is the funeral to be?"

"Tomorrow at 3. Will you preach?"

"Oh, yes!"

"What in the world will you talk about?"

"I shall talk," said the minister, "on the glorious age in which this man lived."

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### THE OLDEST PRESCRIPTION.

Written on a chunk of Egyptian stone 3,500 years ago, what is probably the oldest prescription in the world, says the New York *Herald,* is on exhibition in the Metropolitan Museum of Art.

Scholars agree that fully 3,500 years have elapsed since the wise physician who wrote it drove up in his chariot and inquired as to the state of health of Mrs. Amenpthah, or whatever her name was, for which this medicant was directed. She was suffering from hysteria, so what

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did the physician do but prescribe that the lady have a kind of precious green stone, presumably an emerald, ground and mixed with a resinous powder and burned, so that she could inhale the smoke that came from the costly remedy. Such prescriptions would induce hysteria in these days if the drains on the jewelry casket were especially heavy. The prescription was written on a chunk of limestone about the size of a human fist, by means of a brush and ink. It has been well preserved all these years.

It is well to note the fact that in the eighteenth dynasty women had nerves. Also, a physician must have had nerve to make a woman smoke up her best ornaments for medicinal purposes. The prescription in this case seems to have been an emerald; at any rate, it was very expensive, and betokens the wealth of the patient. Less precious stones, chrysophrase, were used for the middle classes, and plain malachite, which was cheap, sufficed for the poor. From which one is led to remark that humanity has not changed much in the last thirty-five centuries.



### A STORY AND ITS MORAL.

In the September number of the *Ladies' Home Journal,* David Belasco, the playright and producer, gives some of his experiences. He attributes much of his success in his chosen work to the fact that he has always given painstaking attention to details and little things so often regarded as inconsequential. In one popular pastoral play, instead of the actors dining (?) on the usual *papier maché,* he conceived the idea of giving the meal and its sittings a realistic touch by substituting real turkey, real potatoes and real other food. These were served piping hot, and the drafts were so arranged as to waft the aroma of the dinner down to the olfactories of the audience. In order to add to the domesticity and "hominess" of the scene, a cat was trained to walk out before a grate fire, stretch itself, and then meander across the stage in full view of the audience. Pussy was trained to do this stunt by being cramped up in a box somewhat too short for her all day, and this favored her disposition to stretch herself when released from her close quarters. Many other little details relative to stage craft were set forth.

All of which emphasizes the value of thoroughness and attention to details. Belasco states that, when a child, his mother taught him in such a manner as was best calculated to arouse his perception and spontaneities. When she read him a poem or story he was taught to visualize the thing described, to shut his eyes and distinctly see the word-picture presented to him. There was a strong appeal made to his whole gamut of emotions and conceptions. From a psychological standpoint this is interesting when we contemplate how all this as at a subsequent period projected into his life work.

But the moral which in this connection we desire to adorn this tale is that no physician can be successful in the truest sense of the word unless he in like manner gives attention to many small matters. Lack of it, coupled with carelessness, accounts for almost daily blunders. So many sponges and instruments are constantly sewed up after laporotomies that the lay press has given wide publicity to the joke about the advisability of using buttons on the abdomen in order to facilitate the removal of imprisoned articles. Carelessness and haste in making diagnosis have often caused embarrassment to the doctor. Too many are disposed to look lightly upon subjective symptoms and the patient's own version of his case. It usually pays to take time to hear his story; the patient will feel better for having told it, and he may make disclosures that will illumine his case to you.

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Little things relative to the doctor's personality, his dress, speech and deportment, are of immense importance The condition of his instruments and paraphernalia is calculated to either woo patients or drive them away. The neat, clean and attractive office is especially calculated to appeal favorably to the feminine clientele. An unkempt and uncouth office and physician repel patients. A woman can see a cobweb in the northwest corner of the ceiling farther than a mere man can see a horse.

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## ETHICS.

D. L. Field, in a communication to the *Medical Fortnightly,* complains that there are irregularities existing among those styling themselves regular practitioners, which may be called mild quackery.

The Principles of Ethics, he says, contains rules for our guidance which, stripped of all superfluous verbiage, might read: "All doctors of medicine are hereby required to be gentlemen." This may be considered as asking too much by some, but it is the law, boiled down! We should observe it, even if it does require a sacrifice.

Another article of the Code, which says physicians should not make gloomy prognostications so as to magnify the importance of their treatment and cure of disease. Are there not too many who habitually hang out the danger signal, where none exists?

Another article: "Consultations should be prompted in difficult or protracted cases, as they give rise to confidence, energy and enlarged views in practice." This is violated too often. When a council is finally acceded to, the competent home doctor is passed by, and no better one from another place is chosen. It is done because of a fear that it may boost a home rival in his reputation! It is a spirit of selfishness and jealousy! Too many doctors will attempt to undermine a professional brother. The older one will say the younger one may make a good doctor when he has had experience, while the younger one will assert that the older may have been a good doctor in his time, but he is behind the times!

Our whole ethical law should be construed as an amplification of the Golden Rule! We have no right, by jest or look, or by silence even, to injure our professional brother.

What a glorious thing it is to hark back to those old worthiest of the past who were too high minded and honorable to criticise a younger brother, but would lend him a helping hand and put their protecting arms about him. I remember such grand, unselfish men! In this age of greed, commercialism and mad rush to crowd others out of the way, the ethics of the profession are virtually a dead letter!

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## QUININE AND EUQUININE.

Astruc and Courtin (*Journ. Pharm et Chim.*) compare the chemical properties of quinine and euquinine. Of the characters common to both are:—Neutrality to phenolphthalein; they are basic to helianthin and litmus; precipitated in solution by the usual alkaloidal reagents; solutions with oxygenated acids are fluorescent; they give the thalleioquin reaction; are precipitated from their salts by alkali carbonates and bicarbonates; their aqueous solutions become yellow on exposure to light; they give salts by direct action of acids. Among the characters in which they differ are:—Quinine gives the herepathite reaction; euquinine does not; 0.97 molecule of HCl neutralises (with helianthin), one molecule of quinine; 1.05 molecule of HCl neutralises (with helianthin) one molecule of euquinine; 0.99 molecule HCl neutralises (with rosolic acid or litmus) one molecule of quinine; euquinine is freely alkaline to litmus; quinine gives two series of salts, neutral and basic; euquinine gives only neutral salts.—*Pharm. Journ.*

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# REFRACTION.

## VERTICAL IMBALANCES OF THE EYE MUSCLES.

HYPERPHORIA, remarks the *Optical Journal and Review,* is the tendency of one eye to turn higher than the other, a tendency which is overcome by the stimulus to single binocular vision, but there are two varieties of 'phorias of which there is seldom any mention and which, when they are mentioned, are not clearly understood. These are anaphoria and cataphoria. Anaphoria is defined by Stevens as the tendency of the eye to turn up when in the primary position; that is, when it is looking straight ahead, with the head perfectly erect. There is no right or left in anaphoria. If such a case is tested for muscle imbalance with the Maddox rod, the head being forced to stay in the primary position, then the eye which has the rod before it will turn up while the other is fixing the light, such upward movement occurring no matter over which eye the rod is placed; whereas in hyperphoria one eye will show an upward movement behind the Maddox rod, while the other will show a downward movement when the rod is placed over it. The opposite condition to anaphoria is cataphoria, in which the eye with the rod before it, with the head in the primary position, will turn downward, no matter over which eye the rod is placed. The difference between these two conditions and hyperphoria will be noted, and, in fact, either anaphoria or cataphoria may be accompanied by hyperphoria. In anaphoria the head is turned downward more or less so that both eyes may roll upward into a comfortable position, while in cataphoria the head is held high or thrown back, so that both eyes may roll down to a comfortable position. A study of the carriage of the head as compared with the direction of the gaze of people as they pass along the street, and as they sit reading in cars and boats, will show cases of more or less marked anaphoria and cataphoria. These two conditions can be relieved by glasses, by decentering both lenses up or down, as the case requires, provided the power of the lenses is sufficient to make this practicable; otherwise, prisms in the lenses, bases up or down, as required, must be used. In cataphoria the prisms would have to have their bases up, and in anaphoria the bases would have to be down.

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## THE VISUAL HANDICAP.

Ellice M. Alger, in *The Physician,* points out that every defect of the eyes which makes vision either imperfect or a matter of effort is a direct handicap.

Some of these eye conditions are irremediable and shall be alluded to only to urge the vast importance of their prevention. Even the smallest corneal scar may cause serious and permanent reduction of sight, and yet we see day after day conditions which commonly result in scars treated as trivial by parents, and even physicians, because they seldom result in either death or a glass eye. In this class are to be included all the childhood inflammations of the eye, and especially the very dangerous phlyctenular conditions so common after measles and the other infectious diseases of childhood.

Hardly less disastrous are some of the developmental defects of the eyes, though some of them we can happily overcome almost entirely.

In this class of developmental defects come the so-called errors of refraction, far sight, near sight, and astigmatism, every one of which is a handicap to the learning child in direct proportion to its amount.

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The absolutely perfect eye is extremely rare, but in most of us Nature makes a more or less successful endeavor to compensate for our optical defects. If she fails, there is a greater or less reduction of vision; while if she succeeds, she generally does it by an abnormal effort in the focussing process we call accommodation.

But seeing well under these conditions implies muscular exertion just as much as running or lifting, and every one of us has a limit beyond which he cannot go without undue fatigue. The school child, with his long hours and close desk work, very often has to impose on his eyes a greater burden than ever comes to them in his adult years.

A careful examination would probably show that the great majority of school children have minor optical defects, but so long as they are perfectly compensated for they can hardly be considered pathological.

The children with uncompensated defects may be divided into two great classes: those who cannot see well, no matter how much they try, and the much larger class, who, in their effort to see well, exert their eyes beyond their physiological capacity.

The first are readily detected by the rough visual tests almost universally applied nowadays—inability to read letters of a definite size at a definite distance.

The second class often present no evidence at all, except to the expert, since their symptoms only appear after a period of fatigue and are often not referred to the eyes at all. Suffice it to say that frequent headaches, particularly those occurring in the afternoon and including the sick and bilious types, are almost certain indications of eye strain. Fully 80 per cent of chronic headaches are admittedly of eye origin. To a less degree this is true of many unnatural positions in study, of blinking, and peering, and frowning, as well as of many of the habit spasms so often wrongly called chorea. The constant miscalling of certain letters, the skipping of words, the inability to write on a line, all point in the same direction.

The very fact that a child that is bright at play and a leader among his fellows is dull and listless at his lessons is a good indication that he has poor eyes or a bad teacher, not infrequently both. No child can make normal progress or get the normal enjoyment from mental exertion when he cannot see well or when it tires him to try, and the oculist should be called to pass his judgment on the matter.

Neither is this a beginner's task, even under the best of conditions. Some defects absolutely preclude the child ever earning a living at anything which depends on good eyesight, and it is evidently an extravagance for both community and child to force him through the educational mill with the rest. Other children, by aid of suitable treatment and glasses, can have their educational handicap reduced or entirely removed and compete with their fellows on even terms as long as they live.



## THE EYE IN INSURANCE EXAMINATION.

Says the *Lancet-Clinic:* The careful examiner observes many points, even by a discursive examination, which the negligent man readily overlooks. In viewing the applicant with some care he grasps the significance of some symptom which leads him to make a careful examination of a particular part or organ. He must have a certain fine sense of perception to do this, and this sense is acquired, so to speak, by the habitual employment of all his powers of observation. And as he always glances at the eyes of the applicant, just as does every person first looking into the windows of the soul to secure a proper conception of the person's place in the scheme of things, so does the examiner note all the little points about the eye

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which invariably tell the secrets which no man can conceal. Is there paralysis of the ocular muscle, is the arcus senilis present, is there nystagmus, exophthalmos, corneal opacity, cataract? The presence of any of these conditions suggests many things of serious import. This is not the place to enter into a disquisition on the significance of each of these symptoms. But the object of these remarks is to draw attention to the importance of the eyes in order to arrive at a correct appreciation of all medical points involved in the examination for life insurance.

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### CAUSES OF SUBNORMAL VISION.

Lionel Laurance says that the possible causes for vision being subnormal, after an optician has found what he thinks the true correction, are (*a*) wrong lenses, (*b*) blunted vision due to non-use— i. e., amblyopia ex anopsia, (*c*) a lesion left by previous disease, (*d*) structural abnormality, (*e*) active disease.

Excluding the optical, the vision and the visual acuity depend on precisely the same factors, which are roughly the following—transparency of the media, and the receptivity and conductivity of the retina in the eye itself; behind these is the conductivity of the optic nerve, and again beyond this, the interpretive power of the brain.

It is the brain that sees; the eye is merely an agent in order that the impression which it conveys may be conducted in the best way to the cerebral centers of vision. The optic nerve is the carrier of the energy—the precise nature of which we do not know—and the brain interprets the impression conveyed. It has been suggested that the retinal purple serves the purpose of converting light waves into a form of energy which the optic nerve can carry.

Although we commonly speak of the visual powers of an eye, it is obvious that the optic nerves and tracts and the brain itself are factors of equal or greater importance. The dioptric apparatus may be never so perfect, but if the retina is inactive or the optic nerve hampered by disease, the impressions fail to reach the visual centers; or again, the foregoing may be in proper working order, yet the brain be at fault. We have vision of a sort with the eyes closed: many people see things that exist only in their own imaginations; and we see very vividly at times, when we dream. Such impressions, together with hallucinations when the eyes are open, are not derived from original sources of light, nor can the spooks and manifestations so beloved of spiritualists be sufficiently material, according to all accounts, to be reflectors of light, the more especially as they are generally seen in dark rooms.

On the other hand, there may be a perfectly defined ocular image at the retina, and yet one fails to appreciate it: either the optic nerve, although perfectly healthy, fails to convey the impression, or what is, of course, much more likely, the brain is too actively engaged otherwise to take note of the impression conveyed to it. One can walk along the street and receive retinal impressions by the thousand and yet be only subconscious of them.

Notwithstanding that vision and visual acuity depend not on the eyes alone, it is convenient to refer to them as being merely ocular conditions; more especially as vision may, and often does, differ in the eyes of an individual. It is for the optician to grasp that the perceptive faculty of an individual depends not merely on the optical condition of the eyes, but on the brain, which has to interpret the ocular impressions received, and on various other factors briefly referred to. The difficulty, of course, in dealing with any points in connection with vision is to fix a standard—to decide where the normal ends and the abnormal begins.

#### Mentality and Perception.

Quite apart from everything else, the visual acuity reached by a person depends

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on mental activity and education; a line or two of the types may easily be accounted for in this way, and the standard of normal vision, as represented by a Snellen fraction, must vary accordingly. The *average* visual acuity of a healthy eye differs considerably in the consulting room of a west end oculist and the out ward of an east end hospital; and if the average differs, so must the standard of normal vision.

Thus, given equal visual conditions, an educated and mentally alert individual will distinguish between a B and an E when an uneducated and mentally stagnant person will not; it is a case of "the man behind the gun." If the former has VA = 6/6, the latter has less, for no other reason than that of mental torpidity. The latter would probably not notice an odor or a taste which would be very apparent to the former, and would need patchouli and bloaters to stimulate his senses, while the other would be satisfied with essence of violets and turbot.

The optic nerve—said to become functionally less acute as age advances—possesses the faculty of transmitting light impressions only; if it be stimulated by touch, the same results as if it be stimulated by light. A drop in the transmissive power may be pathological, but there must be very many cases where there is a lessened functional activity without there being an actually morbid condition. Consequently, it is difficult to fix the dividing line between the normal and the abnormal, where age or drugs influence the action of the optic nerve and retina.

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## THE HISTORY OF THE CASE.

Some oculists pride themselves on not asking any questions of their patients; they just go ahead with their tests and come to a decision regardless of what has happened before, or of what may be the symptoms of which the patients have been complaining, and for which they think they need glasses. It is true that most of those who come to the refractorist just want glasses, but there are also some who have been reading something about eye-strain and what wonderful things the wearing of glasses will do for this, and it is possible that they have much overfaith and are expecting something that is entirely impossible. For this reason it is a good plan to take down the history of the case; to go ahead with the tests, but try to find out the reason why the patient thinks he ought to have glasses. The mere fact that he has come to the optometrist for glasses is excellent proof that he thinks he may need them, and it is better that he should tell this than to keep it to himself, and expect, in a blindly, faithful way, that the glasses prescribed by the optometrist are going to do something wonderful, something which the optometrist would explain was out of the question if he only knew the patient's thoughts. So, therefore, in getting down the history of the case for your future information, try to find out the expectations of the patient's as well.

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## SOME PRACTICAL POINTS.

R. M. Lockwood, in the *Optical Journal and Review,* gives the following practical pointers:

**With the Rule and Against the Rule.**

Astigmatism with the rule means that a minus cylinder axis horizontal, or close thereto, is called for, while against the rule means that a minus cylinder is required vertically, or close thereto. In view of the training that eyes have had in reading print in which the vertical elements predominate, it will be found that if the best lines in the tests as above described—that is, the fogging tests—are the vertical ones, it will be easy to add too much cylinder before the patient will pronounce the other lines as good; in fact, in some cases there can be an overcorrection of as much as a diopter before this is noticed; hence where the

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best lines are vertical the adding of cylinders had better stop when the patient begins to hesitate and says that there is very little difference, but that he thinks the vertical lines are the best. If both sets of lines were equally distinct on the retina, he would still see the vertical lines the best, for the reason above stated, and due allowance must be made for this. Where the astigmatism is against the rule, and the vertical lines are the blurred ones as the chart is brought nearer, in which case a minus cylinder would be used vertically or a plus cylinder horizontally—then the increase in cylinder power will cause the vertical lines to clear, until they will be the first ones to come out of the fog; but here, as before, we must take account of the effect of previous long experience in reading print, the result of which will be that the patient will see the vertical lines the best while the astigmatism is still not fully corrected, and it will be safe to go on with the cylinders until these lines are the best of the two. Even then the cylinder may not be full correction, and a future examination may bring this out.

**The Static Sphere.**

When the eye is looking far away, with the ciliary muscles at rest, the eye is said to be in a static condition. Where a sphere, in addition to the cylinder, already found and in place, has to be tested out, this sphere is called the static sphere. To find the static sphere we must use a letter chart at 20 feet, if we can get 20 feet, or, if we cannot, we must make an allowance at the end of the test for the shorter distance; for instance, the test could be made at 8 feet, and a ¼ D. would have to be deducted from a plus finding, or a ¼ D. added to a minus finding to make the static correction for 20 feet. To get the static sphere the patient is to look at the letters on the chart and to read as low as he can with the blurring lens already in place from the previous test; probably he cannot do better than the largest letter; then minus spheres should be placed in front of the sphere and cylinder already in the frame and the difference noted. This can be done at first by steps of ½ D., but at the critical point in the test these divisions should be decreased to ¼ D., or even ⅛ D. At every step the clearing of the letters should be carefully watched, for the selection of a sphere depends as much on a comparison of what the lenses do as the eye comes out of the fog as it does by what the patient can read. The object sought is to get the sphere which is the highest plus possible (or, in cases of myopia, the lowest minus) which still gives the best attainable vision. At the close of the test the optometrist should test the patient's ability to read the test type by pointing to the letters in an irregular order, and also to change the chart and use one in which the letters are arranged in a different order. No dependence should be placed on the patient's claim that he can see better with one lens than with another. He should be made to prove it.

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Listen to R. T. Morris, who has caught the inspiration:

"It seems to me that the object lesson of the results of conserving the patient's natural resistance has opened the vista of a new epoch in surgery. Our faces are now turned toward Metschnikoff and Wright with their descriptions of phagocytes and opsonins, and of the natural protective forces of the patient. We are to conserve the natural resistance of the patient and to turn him over to his phagocytes and antibodies as helpfully as we can. This is the new principle—turning the tide of battle only, and leaving the patient with his physiology as nearly intact as possible. It is quite as important for the patient to retain his natural resistance after operation as it is for the surgeon to add artificial means for securing asepsis during operation."

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# THE SICK ROOM.

## CARE OF THE EARS.

E. D. Spear, M. D., in *The Healthy Home.*

THE usefulness and importance of the organ of hearing to civilized man is not properly appreciated until its functions have been temporarily interfered with and some of the many symptoms of disease have been experienced. Nature speaks to us oftenest "in the still small voice," and if we have learned to listen and can rightly interpret her meaning we may be guided by her precepts and avoid danger. We are too apt to neglect the ears. Even if we became conscious of having such organs we do not know what the natural condition is, and when disease comes we are more ignorant still.

### The Three Ears.

The outer ear, with a canal leading inwards to the drum membrane, the drum cavity and the labyrinth, compose the organ of hearing—an external, a middle and an inner ear.

We cannot see or reach far beyond the external ear or the auricle. Just within the entrance to the canal and above, on its upper wall, are placed the glands which secrete the wax which aids in preventing entrance of insects. Nature has very cunningly arranged for the natural removal of the excess of this secretion by causing it to form in the upper part of the canal, from which, when it becomes dry by exposure to the air, it may fall upon the floor of the canal, which just beneath it forms an inclined plane outwards.

If one knows this fact he need not try to aid nature in removing the wax, for in so doing he will most probably defeat her plans by pushing the wax far within, where the canal slopes in an opposite direction, and will leave it within the rigid walls of the bony portion. Many people incautiously make themselves deaf by using a towel or handkerchief rolled in the shape of a wedge, or, worse than this, some ingeniously constructed device "to assist nature" with.

### Sensations in the Ear Have a Meaning.

All sensations, such as of fulness, of burning, of itching or pain, as well as peculiar noises or sounds heard in one's ears, though suggesting the presence of disease, should not be self-treated. These various feelings, the noises and the pain, all mean something, and if constant or recurrent, should arouse the patient to make inquiry as to their cause. Where there is itching a diseased condition of the skin is to be found, and may be temporarily relieved with warm weak saleratus water dropped into the canal. It is best to refrain from picking the ears, because foreign substances of an irritating nature and dirt, so called, may be left upon the very delicate and highly sensitive skin. The ears should not be syringed, and, above all, no "sweet oil" or mixtures containing fats should be turned into the canal.

### About Earache.

In all cases of earache, unless soon recovered from, the sufferer should have the ear examined, instead of first trying the effects of poultices, "earache drops," onions or tobacco smoke. These need never be used to relieve painful ears. Oftentimes the earache is only a sign of disease in distant parts; as, for instance, decaying teeth often cause reflex pains in the ear. How absurd, then, the practice of filling the ear canal with various nostrums! Usually, and almost always in children, an earache signifies inflammation within the drum cavity, and one should seek for other signs to decide if such is the case.

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Stop up the good ear and have the patient asked a question. If he replies promptly he hears readily; if not, there is disease. In such cases an accurate knowledge of the ear must be had before rational treatment can be given.

The common practices among all classes of people, like those above referred to, cannot be too strongly spoken against. If there is anything serious, the oils, pieces of cotton, lotions and so forth, produce more trouble and prevent oftentimes an otherwise easy examination of the affected organ.

It is not possible to give general directions for the relief of earache, though we may refer to two methods of procedure which often avail in the early stages of tympanic inflammation. These are the application of dry heat over the ear, and having the upper air passages (nose and throat) cleared of existing obstructions. We here emphasize the importance of giving early attention to what may seem matters of trivial account, for usually one finds that the predisposing causes leading to the disease of the drum and adjacent structures extended from the nose or throat. Young children furnish by far the largest number of patients suffering with earache, and they are the ones who have not learned how to "blow the nose," and so mechanically open the passages through which the air finds its way within the tympanum.

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### WEAKENED DIGESTIONS.

Supposing a man breaks his arm, you do not expect him to go and shovel snow. If a man sprains his knee or his ankle, he does not enter a foot race. In consumption the digestive apparatus is weakened. It is one of the earliest symptoms of tuberculosis that there is loss of appetite, that there is a disturbance of digestion. The digestive organs are weakened and cannot do a normal amount of work. Fill a stomach like that to a greater degree than a healthy, hard-working man can stand, and you will readily see what happens. That stomach will not be able to do the little work that it might accomplish under favorable conditions, but will rebel against the excessive strain to which it has been put, and the patient who might have received benefit from a carefully regulated course of diet, and who might have been coaxed along and led toward an improvement in his condition, will be very seriously aggravated in his disease, and decidedly handicapped in his struggle against it.

Aside from the large quantities of milk and the many eggs which consumptives were, and in some places still are, forced to swallow, they were also obliged to eat considerable amounts of steak, preferably raw, and in France horse meat has been recommended as particularly valuable not only as a food but as exerting in some occult manner an antagonistic effect upon the tubercle bacilli.

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### CARE OF SCARLET FEVER CASES.

Kate Lindsay, in *Good Health*, lays down the following rules for the nurse in scarlatina: The throat should be sprayed with hot salt and water (a teaspoonful to the pint), or peroxid of hydrogen (one part to three of water), or a saturated solution of boracic acid, at least three times a day.

The air in the room should be kept at a temperature of 60° to 70°, and moist by steam. It has been advised to keep a kettle of water boiling in the room, to which should be added a tablespoonful each of turpentine, eucalyptus, and carbolic acid. At the same time the air in the room must be fresh and pure from the outside. No carpets, tapestry, hangings or upholstered furniture should be allowed in the room to hold infection and defile the air by dust and fabric fibers.

In the chill stage a bath at 100° or a hot sheet pack will often bring out the rash and relieve the restlessness and fever. In the stage of high fever, the

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neutral and graduated cool or cold bath should be given, as the case demands, and as often as needed to keep down the fever. The writer has found frequent hot sheet rubbing to give most satisfactory results in this disorder at this time. Wring a hot sheet lightly out of water as hot as can be borne by the hand, in which a tablespoonful of soda to the gallon has been dissolved, and quickly wrap it around the patient. Then rub the body briskly and lightly over the sheet. This treatment may be repeated several times, after which give an oil rub.

An ice bag or ice collar to the neck for an hour or two, alternated with fomentations once in two hours for fifteen minutes, relieves the throat symptoms very much, as do frequent steam inhalations or the use of the nebulizer with tincture of benzoin or menthol solution. A menthol pocket inhaler will also give relief, often soothing throat irritation and allaying the harassing coughing which results from it.

During the scaling stage, which lasts several weeks, great care and cleanliness are required, and special pains should be taken to keep the scales from scattering and spreading the infection. Sponging three or four times daily with a soda solution—a tablespoonful of soda to a gallon of water—and giving an inunction afterward with massage cream, boracic acid, oxid of zinc ointment, or plain olive oil or vaseline, will prevent the escape of the scales, allay the itching, and protect the patient from sudden chilling, to which he is very liable during scaling.

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### A SIMPLE REMEDY FOR CONSTIPATION.

Many nurses, says the *British Journal of Nursing*, take aperients as regularly as they take their breakfast. This is a pity, for in most cases a change in, or an addition to, the ordinary diet would be quite sufficient. A little fruit on rising often acts like a charm—if possible, a baked or raw apple, an orange, or some dried figs—not once or twice only, but every morning for months.

It is, I know, almost impossible for a nurse to alter the diet provided for her, but all could take the water cure. This consists of a glass of cold water first thing in the morning and a glass of hot water when going to bed. I knew of a very obstinate case which was cured by taking olive oil. Begin by taking a teaspoonful three times a day after meals, and increase if necessary until two ounces a day are taken.

But there are people who do not care for fruit or water, and the very thought of oil makes some people feel ill. There still remain exercises. It is well known that constipation is sometimes due to weakness of the abdominal walls, and these may be strengthened by the following exercise: Stand erect on both feet (not first on one and then on the other), and draw in the abdomen; hold it so for ten seconds, then extend it. Do this twenty times morning and evening every day. It would be better still to do it three or four times a day, but as it should be done with the corsets off, most nurses will not be able to manage it more than twice a day.

There are many other exercises that are very good for strengthening the abdominal muscles, but they are more difficult to explain. This one is very easy, and in many cases very effective; and moreover it improves the figure.

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### A DEPILATORY BEFORE SURGICAL OPERATION.

Cases may arise where it may be very desirable to shave a patient without recourse to the razor, when a satisfactory depilatory is a desideratum. The following preparation, like all the tried depilatories, combines an alkaline caustic action with that of a soluble sulphide:

Monosulphide of sodium.....1 part.
Quicklime .....1 part.
Starch .....2 parts.
Water, a sufficient quantity to form a stiff paste.

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The monosulphide and the quicklime are to be separately pulverized. An intimate mixture is then made with the starch. The amount of water added must be gauged carefully, for too much water will give a thin paste of no value, while too little water produces a crumbly mass that has no depilatory action. The water should be added very slowly, until a mass of smooth, salve-like consistency is obtained. Before application, the patient must be thoroughly washed; all the longer hairs should be removed with a pair of scissors. The paste is then applied with a spatula, forming a uniformly thin layer over the desired place. After five minutes the salve may be removed with a sterile swab of cotton. The skin is to be thoroughly washed with sterile distilled water until all alkali is removed. A clean, sterile shave is thus obtained on short order, and the surgeon may proceed with the operation.

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### USES OF BORIC ACID.

The *Medical Summary* remarks that some of our remedies combine cheapness with therapeutic worth. Such a one is boracic acid. As an antiseptic in minor surgery it is not surpassed by the more powerful ones. A saturated solution is destructive to most forms of germ life. For irrigation of the uterus and bladder we have no single remedy that is more efficacious than boracic acid solution. In ocular inflammations, and even those of septic and specific origin, boracic acid is a dependable remedy. In ophthalmia neonatorum it is now often used instead of nitrate of silver. In cystitis with fetid urine ten grains of boracic acid three times a day soon proves corrective. It is one of our best remedies for bromidrosis. Wounds, sores and cavities may be cleansed with boracic acid water before applying other remedial agents. It is free from danger, and this cannot be said of the indiscriminate use of carbolic acid and bichloride of mercury. Seldom is a more potent antiseptic required than boracic acid and hot water.

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### HOW TO FILL HOT WATER BOTTLES.

In connection with the filling of hot water bottles, a speaker at a recent nursing conference suggested that the bottles should always be heated before being filled. The suggestion, however, needs some qualifications. With rubber bottles, unless the bottles are to be blistered inside very quickly, and so spoilt, a small amount of cold water should always be first put in. If boiling water is then added, the bottle will still be too hot to use with safety without a cover. A stone or tin bottle, if filled with boiling water and placed in a flannel bag, as a hot water bottle always should be, will retain its heat for hours. Possibly the speaker had been provided with bottles filled with hot, not boiling, water.

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### FEEDING IN GASTRIC ULCER.

Singer, in *Wiener Med. Klinische,* has adopted, with some modifications, Lenhartz's method of treatment of gastric ulcer, the main principles of which, as compared with those of the older method, being to obtain a larger value in calories with a smaller volume. In spite of the favorable statistics with regard to hemorrhages on Lenhartz's treatment, the author finds that, after a severe hemorrhage, patients can often not bear an immediate beginning of feeding by the mouth. Thus, in one of his cases in which there had been a hemorrhage eight days before admission and another on the day of admission there was a recurrence of bleeding when food was given by the mouth three days after admission, and again on another tried four days later; only after six days of rectal feeding alone was combined rectal feeding by the mouth able to be resumed without giving rise to hemorrhage. The increase of weight in cases of gastric ulcer treated on Lenhartz's system is most striking, as seen in diagrams showing the steep rise

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in the weight curve. Eggs, milk, cream and butter are a good foundation for the diet and are extraordinarily beneficial for the hyperacidity so often present; when there is a good tolerance for fats the author lays special stress on the giving of cream and much butter. Carbohydrates are not absolutely excluded. Nearly always the author adds "hygiama" or bioson to the milk and puree of potatoes, and foods such as Nestle's, Mellin's, etc., may be given. When there is much vomiting ice prepared with hygiama and milk has repeatedly been found to give good results. The loss of weight which follows a few days' absolute rest from stomach feeding is not to be considered of importance, as it can soon be made up. Indeed, on Lenhartz's system, by the ninth day 2,000 calories of food value are being administered, as compared with 1,000 calories on the fourth week on the older method. Rest in bed is one of the most essential conditions of a good cure of ulcer, and Singer finds that his private patients, after a cure has been effected, are much more willing to avoid indiscretions of diet than to permanently cut themselves off from physical overexertion. Yet absolute proof that an ulcer has healed is not present after the most apparently successful cure.

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## BUTTERMILK IN INFANT FEEDING.

Neff, in the *Journal of the Missouri State Medical Society*, says: Commercial buttermilk is notoriously bad, and the same difficulty of securing clean, fresh buttermilk which most every one encounters led me to prepare it according to the following directions. I have endeavored in each case to obtain the purest, freshest, richest sweet milk that can be provided in the community: The top 9 ounces is removed from a quart bottle of milk after it has stood on ice from six to eight hours, without being disturbed, and this added to similar top milk taken from one or more other bottles, making, in case three bottles have been used, 27 ounces, which is sufficient in most cases. This is put in a clean quart bottle, stoppered and kept in a temperature which permits souring in twenty-four hours. It is then ready for churning, which can be done by simply placing the sour top milk in a quart jar, closed and agitated for a few minutes until the butter separates. The butter and the milk which was originally left in the bottles after removal of top milk are by-products which in many families can be used to advantage, thus reducing the cost of the buttermilk.

A small churn easily cleaned, made of glass and steel, is on the market, and the churning can be done more rapidly.

Sufficient buttermilk will be obtained from this quantity of top milk so that when diluted, as is often done, the necessary quantity for twenty-four hours will be at hand. Dilutions of from one-third buttermilk to three-fourths, or even stronger, are used; hence the quantity of top milk used may be inconsiderable or enough to be of considerable expense to the family in case 3 or 4 quarts of milk are needed each day. This can usually be estimated at two bottles of 6 to 15 cents per quart of milk daily, depending on whether one is in the small town or city. But, as I have previously stated, the family can use the by-products to advantage.

It takes some experience and instruction to teach the method of heating the buttermilk for use, because of the fact that simple heating causes buttermilk to curdle. From one-fourth to one-half ounce of white or barley flour is thoroughly rubbed up with a small portion of buttermilk, any lumps are strained out, and this added to the diluted buttermilk, placed in a double boiler, brought to the boiling point slowly, while constantly stirred, allowed to cool for ten minutes, and twice again brought to the boiling point in similar fashion. It is then poured into the necessary number of feeding bottles for the twenty-four

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hours' feeding, placed on ice and warmed in a water bath when needed for feeding. Buttermilk does not flow so readily through the nipple, which must, therefore, have somewhat of a larger opening.

Malt sugar, cane or milk sugar may be added to this as desired. Likewise after the infant has reached the stage where the addition of fat to the buttermilk is advisable, top milk may be added.

* * *

### BEER AS A CONDIMENT.

*The Lancet* states that although beer does not contain a large amount of nutrient material, there appears to be little doubt that in the healthy individual it favors the assimilation of food in a manner akin to such condimental substances as meat extract, pepper, salt, vinegar, mustard, and so forth. Recent investigations on this point, at all events, show that malt extractives contained in beer, added to a dietary almost devoid of organic condiments, increase the assimilation of non-nitrogenous foodstuffs, particularly fats. In addition 86 per cent of the extractives of beer themselves are assimilated and yield about 81 per cent of their thermal energy to the system. Beer supplies, however, a negligible amount of proteins, but the stimulus of its alcohol increases protein absorption from nitrogenous foods. In these scientific terms, therefore, the practical observation that beer, bread and cheese make an appetising, nutritious whole receives definite endorsement. Physiologists have put forward from time to time various explanations of the fulness and plethora which often succeed the habitual and excessive drinking of beer—it is strikingly exemplified in the brewer's man—and it now appears that this effect is not due to the nutritives of the beer, but to the tonic or condimental action of the malt extractives, which increase the assimilation of the foodstuffs partaken with it. Some valuable scientific contributions upon this and related subjects appear from time to time in the *Journal of the Institute of Brewing,* in which will be found the reports of the International Physiological Research Institute founded for the purpose of carrying out investigations on the physiological effects of beer and other alcoholic beverages. These researches will be welcomed as calculated to throw light upon the hygienic aspects of the national beverage.

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### HOUSE-CLEANING OUT OF FASHION.

Time was, says *Good Health,* when house-cleaning, a term synonymous with household upheavals and family frictions, was considered absolutely necessary in every well-regulated home, was just as sure to come as Thanksgiving and Christmas.

That was in the days when carpets were the only floor-coverings and houses were heated by stoves or grates. Quite proper was it for the housewife to jerk out the tacks and take up the dust-filled carpets for a good beating each fall and spring, or both, were she of the really particular class, the time for such procedure being governed largely by the weather.

Conditions have changed in the interim, however, hardwood floors and rugs with furnace or steam heat being the rule now rather than the exception, and while there are some housewives who continue to do things just as their foremothers did, a large majority keep pace with the times. The modern method is to keep the house clean all the time, so that an annual or a semi-annual tear-up is not necessary.

By keeping all the rooms orderly, sweeping once each week and dusting twice as often, any house can be kept in a perfectly clean and sanitary condition, that is providing the work is done thoroughly, every niche and corner being touched in the process. Closets and dres-

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ser and cupboard drawers should be kept in order all the year round. Cellars and basements need constant attention, not just once or twice in a twelve-month. The floors thereof ought always to be clean and the walls free from webs and dust. Decaying vegetables and fruits should be removed when sighted and an occasional wiping of fruit cans and renewal of jar coverings are among the really necessary things to do. When clothing is cast off, instead of being tucked away in the basement or garret for dust to accumulate on or moths to attack, it should be given to some needy individual at once. The corners and crannies of too many houses are stuffed with such accumulations. Old newspapers and magazines are more easily gotten rid of a few at a time than by the drayful.

Curtains ought to be washed when soiled. And right here it should be noted that if they are washed often and when less dust-and-grime-soaked they will last much longer. Rugs can be sent any time to the cleaners or be beaten on the premises, as one wills. Ceilings, walls and pictures may be kept dustless by a going-over now and then. The new idea involves a health-principle: the eliminating of dust. The up-to-date housewife does not need to wear a dust-cap even on her sweeping days. With carpet sweeper and the new black-square dust-cloths that hold the dust instead of flirting it out on the air, she feels she has mastered the situation completely, knows that she does not endanger her own health nor that of her family by breathing in dangerous germs with the dust particles.

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## DILATATION TEST FOR CHRONIC APPENDICITIS.

W. A. Bastido, in the *American Journal of the Medical Sciences,* calls attention to the usefulness of dilating the colon with air to determine the presence or absence of a latent or chronic appendicitis. Since his first report of the test, he has applied it in a large number of abdominal cases, and have been able in a number of instances to establish the diagnosis of appendicitis when all other methods of examination failed completely or left the examiner in a state of reasonable doubt. In addition, he has received verbal reports from several surgeons who have been employing the test as a routine in their hospital cases. In their experience, as well as the author's, the test as checked by operation has proved reliable, failure being reported in only four or five cases in several hundred.

To make the test a colon tube is passed eleven or twelve inches into the rectum and air injected by means of an atomizer bulb. If, as the colon distends, pain and tenderness to finger-point pressure become apparent at McBurney's point, there is appendicitis. We have compared the test in a number of instances with the Rovsing test and find this much the more certain; but at times, after moderate dilatation with air, the Rovsing method of forcing the air back into the cecum may be used with advantage. We might sound a warning that if most of the air is not allowed to escape before withdrawal of the tube, colicky pains are likely to ensue.

The test is not needed in an acute case, and in such would be contraindicated; neither is it required in an undoubted chronic case. But the indication for the test is a suspected chronic or latent appendicitis, or any persistent digestive or abdominal disturbance, in which no cause can be found for the trouble. Ordinarily one may entertain doubt about the diagnosis, or at least hesitate about urging operation, when tenderness at McBurney's point can be elicited only on very deep pressure.

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One should take every opportunity of testing eyeball tesion, which will enable one to diagnosticate glaucoma from the increase in tesion presented by this disease in time to save the eye.

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# MEDICAL PHARMACY.

## DEFINITENESS OF DRUG STRENGTH.

H. B. HEMENWAY, in the *Medical Council,* states that there are certain elements of indefiniteness in the use of drugs for remedial purposes which have not received as much attention as they deserve. While combinations are often advisable, the dosage of the individual drugs should be varied independently. He who constantly uses a ready-made combination loses sight of the effect of the individual drugs in the mixture, and not infrequently he gives in such a mixture a drug which is contraindicated in the case under treatment.

Definiteness as to strength is essential for surety of action. If a drug contains 50 per cent of impurities, the size of dose must be doubled for the same result. If the impurity is harmful, the ill-effect may more than counterbalance the beneficent action of the remedy. The pharmacopeia fixes a standard of strength. This does not, by any means, indicate that the drug which you purchase will be of that strength. In glancing through the reports found in the *Bulletin of the Indiana State Board of Health,* for example, one is struck with the fact that not seldom the strength of the drugs tested is less than 60 per cent of that required. Physicians who do their own dispensing are especially liable to be thus victimized. They are the prey of cheap supply houses, and cheap prices mean cheap goods. Nor is the fault thus confined to firms ranked as doubtful. One very prominent firm, whose name is supposed to be a guaranty of purity, has in its price list often two grades of drugs. One is marked "pure" and the other "highest purity." There is nothing in the price list which I have seen indicating that the "pure" drugs are below the U. S. P. standard, and many honest persons are misled into supposing that the cheaper drug is of standard strength.

A tablet, especially if old, is of slower absorption than a solution. The effect of the same dose of sodium salicylate in solution or in tablet form, therefore, differs. Indefiniteness in action, therefore, results from lack of care as to the form in which a drug is used.

Again, because phenol salicylate (salol) is insoluble in the stomach under normal conditions, a pill composed largely of that ingredient will be of little use in the stomach.

Even "when tightly corked," both organic and inorganic drugs may frequently undergo chemical changes. Drugs may, therefore, vary in therapeutic effect with age. A drug a year old must be considered of uncertain value, generally speaking.

Unfortunately, one of the most common sources of unsatisfactory therapeusis is a lack of clearness in perception as to what is needed—a lack of scientific basis for the art. It is useless to give pepsin in amylaceous dyspepsia. Likewise, when the fault is in the intestine, results are not so sure if a remedy be given which is absorbed in the stomach. The treatment for thrombosic apoplexy should be the reverse from that for hemorrhagic apoplexy, yet I have seen patients suffering with cerebral thrombosis, with heads raised, and treated with cardiac depressants.

## RE-FILLING PRESCRIPTIONS.

*Notes,* the organ of the National Association Retail Druggists, takes the ground that a druggist is warranted in refilling a prescription unless the physician writes upon the prescription "Non Repetatur." They place the responsibility upon the physician. They complain

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that "our physician friends evidently want the pharmacist to shoulder the burden of refusing to refill a prescription and explain to the owner thereof why he will not refill it. It seems to us that this is an unfair proposition, because the pharmacist is not in charge of the case. It is not for him to say why the patient should not have the medicine which the prescription calls for one or two weeks after the prescription has first been filled. It is the province of the physician to determine what medicine the patient shall have and whether the patient shall continue to order this same medicine after the quantity specified in the original prescription has been used."

The *Physicians' Drug News* thinks the view *Notes* takes of this matter is correct, and their suggestion that "when you write a prescription, decide then and there whether the prescription should be refilled or not. If you are willing to have your patient continue the medicine after the original quantity prescribed has been taken, no definite instructions are necessary. If you feel that a new prescription will be required or that the case will be cured when the first prescription has been used, then write the words, "Non Repetatur," at the bottom of it and it will not be "refilled," is good.

But will all pharmacists respect the physician's "Non Repetatur"? asks our contemporary. It fears a great many will not, though it has no evidence to the contrary.

However, when the doctor fills his own prescriptions, it is immaterial to him whether a druggist will or will not refill. He knows the patient will come back when the medicine is gone and he can refill or change the prescription as he sees fit. Dispensing benefits the patient as well as the doctor. We cannot blame the druggists for complaining, but they really cannot blame the doctor for dispensing.

### MAKING SUPPOSITORIES.

Directions for manufacture and cuts of suppository machines are given in Maltbie's *Practical Pharmacy*, from which we extract the following:

Suppositories of cacao butter are prepared according to the following formula:

The medicinal substance, the prescribed quantity. Oil of theobroma, grated, a sufficient quantity. The quantity of cacao butter is determined by the desired weight wanted in each suppository: Example: If the weight desired in each suppository is 2 Gm. (30 grains). and it contains 7 grains of medicinal substance, then the difference, 1½ Gm. (23 grains) is cacao butter.

Suppositories may be molded by hand in a manner similar to that in preparing pill masses, being rolled out and cut in desired lengths. The more satisfactory way, however, is to melt the mixture and pour it into cooled molds, or they may be pressed into shape by suitable presses.

In preparing suppositories containing softening substances like phenol and chloral, about 10 per cent of spermaceti may be added to the mass.

Considerable skill is required in the manufacture of suppositories, particularly if they contain extracts or the weather is hot (in the latter event ice is necessary), and we would not advise you to undertake their manufacture in small quantity.

* * *

### SOLUTION OF ZINC CHLORID.

(Burnett's Disinfecting Fluid.)

| | |
|---|---|
| Zinc, granulated | 6 av. oz. |
| Hydrochloric acid | 17¼ fl. oz. |
| Nitric acid | 100 min. |
| Zinc carbonate, precipitated | 132 gr. |
| Water | p. s. to make 1 pint. |

To the zinc contained in a glass or porcelain vessel add 4 fluidounces of water, then gradually add the hydrochloric acid, and digest until reaction ceases and the acid is saturated or refuses to dissolve any more of the metal. Pour off the solution, add the nitric acid, evaporate the solution to dryness, and

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heat the dry mass to fusion at a temperature not exceeding 239° F. Let it cool, and dissolve it in a sufficient amount of distilled water to make the product measure 16 fluidounces. Then add the zinc carbonate, agitate the mixture occasionally during 24 hours, and then set it aside until it has become clear by subsidence. Finally separate the clear solution by decantation or by means of a siphon.

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### EPSOM SALTS.

The *Physicians' Drug News* thinks that after all the storm over granular and effervescent salts, of unknown number and with names ingenious and otherwise, there's nothing better than good old epsom salts, with its price about five cents a pound in strong contrast with others from 75 cents a pound up, mostly up.

The only apparent object of a granular effervescent salt is to improve its palatability. This is done only at considerable expense, while the medicinal value is actually decreased.

Our contemporary has worked out a formula for a solution of epsom salts based on one suggested by Dr. Burnett that it thinks you will like. It is as follows:

| | |
|---|---|
| Epsom salt | 1 lb. |
| Coffee, roasted and ground | 2 oz. |
| Hot water | 1½ pts. |
| Saccharin | 85 gr. |
| Oil cassia | 10 min. |
| Oil cloves | 10 min. |
| Oil anise | 60 min. |
| Oil sassafras | 100 min. |
| Vanillin | 10 gr. |
| Tr. cudbear to color. | |

Add the coffee to the hot water and allow to stand 15 minutes, pour off and then add the salts. Mix the other ingredients and triturate with about four ounces of talc or carbonate magnesia. Add the salt solution slowly with constant stirring and filter, adding through the filter enough water to make two pints.

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### EXTRACT OF INDIAN HEMP.

The author says that as it is generally admitted that the resinous portion of the extract contains the active principle, and therefore extracts which are practically pure resin may be expected to be therapeutically more active. The author gives a simple and economical method for obtaining such an extract, which consists in washing away the brown extractive with warm water, after the alcohol has been distilled off.

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### NOTE ON SPIRIT OF SAL VOLATILE.

For the preparation of sal volatile the writer recommends the following:

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|---|---|
| Oil of nutmeg | 4½ drachms |
| Oil of lemon | 6½ drachms |
| Water | 2 pints |

Distill one pint, mix with six pints of alcohol.

Dissolve ammonium carbonate 4 oz., in strong solution of ammonia 8 oz., water 9 oz., by the aid of gentle heat. Add this solution to the alcoholic solution of oils. In our opinion there is no necessity for even "gentle heat."

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### A SUGGESTED STANDARD FOR THYROIDEUM SICCUM.

As it is agreed among most pharmacists that the activity of thyroid is dependent upon the combined iodine present, the author of this paper thinks that an iodine standard should be made official. He gives a method for determining the iodine which is practically the same as Baumann. He also states that an iodine standard of 0.15 per cent could be adopted for thyroideum siccum without in any way unduly harassing the manufacturer.

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### LINIMENTUM AMMONIAE.

The author briefly mentioned the various devices used to prevent solidification caking, and partial separation, of linimentum ammoniæ. As a result of experiments made by him he advises the following method, which consists in reducing the amount of water in the preparation to a minimum, as giving effectual results:

| | |
|---|---|
| Almond oil | 3 ozs. |
| Olive oil | 8 ozs. |
| Strong solution of ammonia (0.880 of commerce) | 1 oz. |

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# CORRESPONDENCE.

### A CRY FOR HELP.

We are in receipt of the following pathetic appeal from a young man, which is typical of the same sort of plea that confronts the general practitioner every little while in the course of his family practice. We print it because of its commonness and typicality. Its frequency and typicality make it none the less urgent. For obvious reasons, we withhold the name of the correspondent.

Editor MEDICAL BRIEF:

About four years ago I began practicing a bad habit, which is ruining my life, and has resulted in sexual weakness.

When I was converted about one and one-half years ago, or perhaps a little over time stated above, I began to realize the awfulness of the habit which I had practiced so long, and made an earnest effort to stop it, but all in vain.

I have consulted doctors, but they seem to treat it as a common thing among men, and give me some pills, or perhaps prescribe washing off the afflicted parts with cold water, which has helped me but a very little, and now I appeal to you to give me advice concerning this disease.

I am a young man nineteen years of age, have no bad habits with the exception of this one spoken of in this letter.

Am at work every fair day and am tired at nights, and sleep well.

Have taken medicines and drugs, also have tied my hands a number of times, but without good results.

Will you kindly prescribe some medicine or treatment for me immediately?

You may be assured your advice on this subject will be appreciated.

G. L. G.

There is little that we can say in our editorial capacity to this young man. The treatment of such cases, as every physician knows, is moral rather than physical. The way to stop is to stop. We would, however, recommend him, and all who are in like case with him, to seek out some honest, conscientious practitioner and confide in him absolutely. Such a man, especially if he be an older man, will know how to give the unfortunate youth the moral and mental support that he needs. For the rest, all that can be done is to lay out a healthful, rigorous, sufficiently busy course of life, cultivate the society of pure, wholesome men and women, and resolutely bring will power to bear upon the situation. But get the co-operation of a physician by all means.

### NERVOUS IRRITABILITY.

Editor MEDICAL BRIEF.

I see by reading the "MEDICAL BRIEF" that you have given advice to other unfortunates. So I thought I would write and ask you for advice in my case.

I am forty-four years old, single, have no regular occupation, but am on the move most all the time; general health not very good. Masturbated from about thirteen to seventeen or eighteen years of age. After quitting the habit I began having nocturnal emissions, which have continued without intermission until this day.

At first they would occur from three to five times a month, but they have dwindled down until they don't occur one-third that often. My erections are weak and of short duration, and my ejaculations during sexual intercourse are either delayed or none at all. I am regular in all my habits, have a good appetite, but my food don't seem to give me any strength. I am weak and nervous and have an irritable temper. I am also suffering from a bad case of piles, tumors have formed which bleed very profusely when at stool. I believe that

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the piles are partially the cause of my sexual trouble.

Now, after reading the above, if you think that you can advise me as to what course to pursue I will be very thankful.

H. C. H.

Here is a case of a man who has, happily, overcome the physical part of the masturbating habit, but seems to suffer still from the weakening mental and nervous effects. He still has, so to speak, the "masturbating mind", which is even more difficult to get rid of than the physical habit. We repeat to him the advice given the previous correspondent, namely, to seek the counsel and co-operation of some experienced and conscientious physician whom he can trust, and follow his directions. The strong probabilities are that the patient is worrying himself unnecessarily. Doubtless if he would "forget" his sexual life for a while, or at least cut down his sexual relations to normal, and have his hemorrhoids attended to, he would quickly recover his normal health and nerve. The piles are unquestionably keeping up a local irritation of the parts, and causing his mind to dwell upon the subject. The psychic element in these cases—which is practically all of the trouble—can only be adequately dealt with by the physician in person.

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## OLIVE OIL FOR GALL STONES.

Editor MEDICAL BRIEF.

Olive oil is often prescribed by doctors for the cure, or prevention, of gall stones.

Our physiologies teach us that oils do not pass into the circulation through the portal vein and liver, but through the thoracic duct.

Will you please tell us, through your columns, how the oil acts on the liver, or bile, to prevent formation of stones—if it does it at all.

MRS. G. S. MARVIN.
Seattle, Wash.

It has been pretty well established that olive oil does not have any direct influence upon gall stones, either in preventing their formation or in dissolving them after they have formed. The appearance in the stools of what seem to be minute particles of calculus has been shown to be nothing but hardened particles of the oil itself, mixed with fecal debris. However, olive oil has the useful property of keeping the digestive tract in a healthy and patulous condition, thus indirectly ministering to the activity of the gall bladder and ducts, and in this way helps to prevent stone formation. It is also very nourishing. It is therefore often good treatment for these reasons.

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## AN INCOMPATIBLE CHLORAL MIXTURE.

At a recent meeting of the Edinburgh branch of the Pharmaceutical Society of Great Britain, Mr. Donald McEwan brought the following prescription to the notice of the meeting:

Syrup of chloral.....1 drachm.
Heavy calcined magnesia.....1 drachm.
Wine of ipecac.....1 ounce.
Tincture of belladonna.....1 drachm.
Water, to make.....6 ounces.

H setated that, on the day following that on which the medicine had been dispensed, the prescriber brought the bottle to the pharmacist, saying that he had meant to give his patient syrup of chloral, but he feared that spirit of chloroform had been put into the mixture instead. Investigation showed that chloroform had been formed from reaction between the chloral hydrate and the magnesia, magnesium formate being also produced. When the prescriber was informed of this, he omitted the magnesia with satisfactory results. Mr. McEwan pointed out that the magnesia also liberates alkaloid from the belladonna and ipecac preparations.

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It is wise to emphasize that the newly-born are subject to a variety of infections, not usually mentioned in text-books.

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# ELECTRO-THERAPY.

EDITED BY NOBLE M. EBERHART, A. M., M. D.
72 MADISON STREET, CHICAGO, ILL.
Professor and Head of Department of Electro-Therapy, Chicago College of Medicine and Surgery; Surgeon and Radio-Therapist to Frances Willard Hospital; Professor of High-Frequency and Vibration, Illinois School of Electro-Therapeutics, Chicago.

## RADIUM IN MALIGNANCY.

C. W. MANSELL MOULLIN, at the Roentjen Society, London, denied that radium had a cumulative action. A second exposure was more destructive than the first, not because the influence of the radium was cumulative, but because the resistance of the tissues had been lowered, and they had not had time to recover. Nor would he admit a selective action on the part of radium. As to the indications for radium therapy, he thought there was no inconsiderable degree of danger in treating any but small and superficial growths with the small quantities of radium at present at our disposal. Excepting rodent ulcer, radium should be reserved for cases either inoperable or inaccessible to ordinary methods, and even in rodent ulcer he had known radium to fail completely. Leaving on one side all questions as to size and depth of tumors, the facts that seemed to weigh most in determining the clinical value of radium were slowness of growth and mildness of malignancy.

Mr. Mackenzie Davidson was even more emphatic in expressing his distrust of radium in malignant disease. He had never seen a malignant growth of any considerable extent which had been cured by radium. The immediate effect was often remarkable, but there was recurrence. He agreed with Mr. Mansell Moullin in deprecating the desire on the part of the ignorant public to "try radium." By "trying radium" some patients had ended their existence a little sooner than they would otherwise have done. In ophthalmic surgery radium had the greatest value. In every case of the hitherto incurable "spring catarrh" that he had treated he had found the most satisfactory result. Although most cases of rodent ulcer got well, he had known some in which radium had failed, and one at least in which it had "fanned the flame."

Dr. Horace Manders found that the use of adrenalin before an application of radium was a great advantage; the success of the treatment coincided to a great extent with its use, and he thought it worth while taking into account in connection with the possibly unfavorable effect of hyperemia in radium therapy.

Radium had a defender in Dr. N. S. Finzi, who stated that he had been working with more than 20 centigrams, although he did not consider even this amount to be large enough, and looked forward to working with grams instead of centigrams—as his stock of radium had increased, so had the success of his treatment. The second 50 of his 120 cases had yielded better results than the first, and the last 20 better still. These 120 cases were cases of inoperable malignant disease, and out of 90 in which treatment was finished, he had 10 in which the growth completely disappeared, but in 3 of these 10 there had been recurrence. In 1 of the remaining 7 the cure had lasted for more than two years.

## ELECTROLYSIS AND IONIC MEDICATION.

Sinclair Tousey, in the *American Journal of Dermatology*, states that treatment by electrolysis is useful in re-

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moving *superfluous hair,* and it is important to use the negative electrode as the puncturing needle, because otherwise the skin may be indelibly marked by metallic ions carried into it by the current. This might happen with iron or steel needles, but probably not with either platinum or gold; still it is better to use the negative electrode because it has a liquifying effect which loosens the hair and the needle better than if the current is reversed. It surprises one at first to see how deeply the needle must be introduced in order to kill one of these hairs; it should catheterize the hair follicle, not penetrate the flesh, and the strength of current employed by the author is about four milliamperes applied for about ten or fifteen seconds. The needle is introduced, and then the current is turned on and regulated to the proper strength while the patient presses her hand upon a sponge electrode. After a sufficient application the patient raises her hand slowly from the sponge electrode and the current ceases to flow. Then another hair follicle not too near the other is catheterized, and again the patient starts the flow of current by pressing her hand upon the sponge electrode. One adjustment of the rheostat and strength of current usually suffices for an entire treatment, at which a dozen hairs may be removed one after another. A downy growth had better be left alone and the treatment used only in cases with strong, heavy hairs, especially if they are black. A certain percentage of the hairs which are removed return and have to be treated again; and other hairs which originally were not coarse become so in consequence of stimulation. The treatment is, therefore, apt to be tedious. Great care must be exercised to avoid making too much of a pustule with the galvanic needle, as that would produce a disagreeable scar or possible pitting like smallpox.

Galvano puncture is excellent for small warts and moles and fleshy tumors of the skin, and also for angeiomata; but carbon dioxide snow is preferable in some cases of the latter disease, and the high frequency spark in some cases of the other troubles.

Ionic medication by electrolysis, usually cataphoresis, will probably be found of immense value in a very great variety of skin diseases, and the author predicts its wide utility in skin diseases of a germ origin. Stephan Leduc has done a great deal to further this treatment, and the present author has employed it with such brilliant success in a case of long standing furunculosis that details of the treatment of this case may be valuable. For two years and a half the patient, a man of forty-five years, had never been free from a number of boils simultaneously on the back of the neck; some developing, others at their height, and others healing. The condition had been general for six months with forty large boils requiring to be lanced in different parts of the body and limbs. The systemic disease subsided under a treatment which has afforded the author success in scores of cases of furunculosis. A laxative is given every day, such as cascara podophyllin and belladonna. A specific remedy is given such as R, Ol. Phosphorati ℥ss, Ol. Morrhuæ ad ℥iii, M. Sig. ℥ii, t. i. d.; or R, Syr. Hypophosph. Calc. Sod. Pot. (each gr. v) t. i. d. The former is too disagreeable for some people, but is wonderfully effective. High frequency currents were applied as a nerve tonic and rhythmic galvanic currents to relieve spasm of the cerebral arteries, which was really the cause of the patient being referred to me for treatment. A combination of these treatments made the patient robust, but still it seemed impossible to get rid of the recurrent boils, by this time not much more than bad pimples on the back of the neck. Germs were evidently deeply lodged in the sebaceous glands, and for a time the author debated between the use

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of the X-ray to dislodge them and ionic medication by cataphoresis to carry a germicide into the pores and destroy the germs *in situ*. The latter method was adopted with complete success. The negative sponge electrode was applied to the epigastrium and was moistened with a weak solution of sodium bicarbonate which the author finds greatly preferable to salt solution for moistening sponge electrodes. The positive electrode was a polished metal disk 1⅞ inches in diameter, covered with three thicknesses of cotton wadding such as is sold by dressmakers' supply stores. This was thoroughly moistened by pressing it again and again against the bottom of a saucer full of 1/200 solution of zinc sulphate. The current was of a strength of from 5 to 8 milliamperes and was a constant one for five minutes. During this time the abdominal electrode was practically stationary, but the one at the nucha was rubbed over the affected region without breaking the contact. The skin of the back of the neck was decidedly red after each application and felt quite raw after one application with a stronger current of 10 to 15 milliamperes. Reversing the current with the original 5 to 8 milliamperes immediately produced a strong burning sensation from carrying acid ions into the skin; so it was important to see that the right polarity was used. Twelve cataphoretic treatments were given from January 28th to February 24th, 1911, and on June 1st, 1911, there had been recurrence.

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## ELECTRIFIED CHILDREN.

Interesting investigations into the effects of electricity upon the development of school children have recently been made in Stockholm. The walls and ceilings of a schoolroom were lined with a coil of wires through which a high-frequency current was passed. The children in the room were thus in the position of an iron core in the center of a magnetizing coil. Fifty children were kept in this room, while fifty others of the same average age, size and mental development were kept in an adjoining room without electrical treatment. It is stated that at the end of six months the children under electrical treatment showed an average growth of two inches, while those without electricity grew only 1¼ inches. The electrified children showed an increase in weight and other forms of development in proportion to their height. The electrified children also showed an average proficiency in their studies of 92 per cent, and 15 of them showed 100 per cent. The unelectrified children, on the other hand, were only 75 per cent proficient on the average and not one of them reached 100 per cent. It is added that the electrified children appeared to be much brighter, quicker and more active. They were prompter in attendance and much less subject to fatigue. The teachers also showed superior working capacity in the electrified room. While there was an odor of ozone in the room, it was held that the presence of ozone would not account for the results observed.

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## THERMO-THERAPY IN GYNECOLOGY.

By S. Flateau, M. D., Nuremberg (From *The Lancet*).

Ages ago the therapeutic instinct recognized the healing properties of warmth and added them to its stock. But the employment of heat as a treatment, founded on scientific principles, dates from the time when August Bier collected, extended and enlarged the earlier works of physiologists and pathologists in his system, "Hyperamie als Heilmittel."

As a matter of course, the gynæcologists, too, were desirous of applying the advantages of hyperæmic treatment to their special branch, the accessibility of the female genitals favoring the introduction of heat. Finally, according to the researches of Goldscheider,[1] the abdomen seemed especially adapted to the

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stimulating properties of warmth on account of the numerous nerve endings susceptible to heat which it contains (Ruffini termini). We know, indeed, that warmth exercises an expanding effect on the vascular system and that the amount of blood in the skin operates on the neighboring deeper-lying vessels in the sense of causing a more rapid exchange, a larger "turnover."[2] As a matter of fact, the abundant subcutaneous cellular tissue by its low conductivity (which was demonstrated by Fuchs[3]) forms a great obstacle to the penetration of heat when we desire to apply it only through the skin. But, on the other hand, by reason of the extraordinarily decreased speed of the blood in the pelvic venous system, we may assume that the heat will not be too rapidly dispersed or lost, but that, on the contrary, it will accumulate. Moreover, the stimulating effect of heat therapy increases, to a certain degree, with the degree of temperature and the duration of the application. It is on this hypothesis that thermotherapy, in cases of pelvic diseases in women, must be built up.

But a long time passed before a useful and practical method, which was destined to receive widespread recognition in medical circles, made its appearance. Strictly speaking, the first applicable thermo-apparatus was that produced by Polano,[4] while working side by side with Bier and Klapp in Greifswald. In this apparatus hot air, up to a temperature of 100° C., was caused to circulate round the abdomen of the patient, the abdominal regions being isolated in a wooden case. But in spite of the excessive heat registered by Polano's thermometer, the

On the other hand, the method is out of place in treating cases where there is fever, and in all diseases of the annexa in which pus is present or may be expected to form, and in tuberculosis of the genitals. As is well known, the gonococcus is hypersensitive to high temperature,[11] and hence diathermal experiments in cases of infection with Neisser's diplococcus would probably be attended with success. Usually I apply the instrument to patients for three hours daily, although, of course, there is no reason why this duration should not be increased. The temperature of the pelvis falls very slowly after the instrument is removed, so that the tissues only assume their normal temperature after one or two hours.

I demonstrated my apparatus before the Franconian Gynæcological Society on October 24th, 1908, and spoke, too, of the extent to which it might be employed.[12] This I wish to emphasize because the whole idea was evidently in the air during the development of our electrotherapeutic methods—I mean the idea of diathermia, the thermo-penetration of segments of the body (*vide* the works of von Zeynek, von Preyss and von Berndt, Klingmüller and Nagelschmidt). Thus, Sellheim described, eighteen months later,[13] a process in which the temperature of the pelvic organs was raised to 40° and 41° C. by passing the so-called high-frequency currents (de Forrest current) between two electrodes. For the present, however, there are two arguments against the general employment of that method. First, we still know too little concerning the physical and biilogical effects of the high-frequency current on the living tissues. Secondly, Sellheim's apparatus is much too dear. Its price ranges from £35 to £45, and only one patient at a time can be treated. The purchase of a number of Sellheim's apparatus for a large gynæcological department with moderate means would be in most cases an impossibility.

Next, Feis, in Frankfort, in ignorance of my first publication, announced his kolpotherm.[14] In this instrument a small electric lamp is enclosed in a metal case and introduced into the vagina. Compared to the fragile carbon wire and glass case in Feis's kolpotherm, my de-

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vice has the advantage of being absolutely unbreakable, and can be used for an unlimited length of time.

I do not report a large number of cases, but I wish to make more generally known a method which I devised three years ago, and since then have thoroughly tested in my clinic and in private practice. To recapitulate: (1) This vaginal heating instrument, the "Pelvitherm,"[15] raises the temperature of the female pelvis up to about 40° C. for any length of time; (2) its use, in contrast to all other existing methods, requires no special superintendence, and therefore does not take up the time of the clinical staff; (3) it can be used anywhere where electric light is in use, including the patient's home; and (4) the instruments are so cheap and lasting that every hospital or private practitioner can procure a number of them.

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## X RAY TREATMENT OF SARCOMA:

By J. Delpratt Harris, M. D., M. R. C. S., in *The Lancet.*

The following case may prove useful in marking out a new line in the use of X-rays therapeutically:

The patient, a boy, aged 4 years, was brought to the Royal Devon and Exeter Hospital for a small swelling over the ascending ramus of the jaw on the right side. As he had at the time a catarrhal condition of the auditory meatus on both sides, the swelling was thought to be glandular, and the ears were thoroughly treated until the discharge ceased. During the next month the swelling became much larger, the whole bone on that side appearing implicated and the enlargement being now noticeable both inside the mouth and externally. A fortnight later the swelling had increased in size and a point of softening was noticed on the inside. At this time (June 25th, 1910) the case was admitted.

On admission the patient was drowsy and took very little notice. The temperature ranged between 98° and 100° F., rising on July 4th to 103.4° in the evening. On July 5th, under chloroform anæsthesia, an exploratory puncture in the mouth was made, and some soft material was removed for miscroscopical examination. Some slight gouging and examination with a probe was made in order to ascertain whether tubercular disease of the bone existed. No evidence of this was obtained. On July 11th the pathologist reported: "The growth proved to be small round-celled sarcoma."

After the operation the patient became more drowsy than before, the skin over the tumour becoming reddened and softened as though about to break down. The temperature ranged between 101° and 104°. Inside the mouth the condition was that the swelling was so situated that the teeth could not be made to touch, and mastication of food was prevented, the teeth chewing the tumour and causing a line of ulceration. Coley's fluid was now injected: July 15th, m ⅛ was given; 16th, m ¼; 17th, m ⅜; 18th to 20th, m ½; 22nd, m ¾; 23rd and 24th, m 1⅛; 25th, m 1⅜; July 26th to August 3rd, m 1½. After the injections, which were given in the forenoon, the patient usually had an evening reactionary temperature of 101° to 102°, the temperature becoming normal in the morning. As a result of nearly three weeks injections, the swelling was noted as being "much smaller, the skin becoming normal in appearance, and the general condition much improved. The fluid was sometimes injected into the tumour, at other times into the arm."

On persevering with this treatment it was noted that reaction was still obtained on August 20th, but on Sept. 9th, although m iv. were given as one dose, no reaction was obtainable. The case being now in a latent condition and no further benefit appearing, on Sept. 18th, 1910, what must be called a colossal dose of X rays was given, since the word massive

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has already been used for far smaller doses. The child was prepared for the ordeal by being given a mixture of bromide and chloral in small doses during the day. A regenerating X ray tube (sparking from mica type) in good condition being selected, a glass shield and cylinder were used to protect other parts of the face, and to maintain the proper Sabouraud distance; an aluminum filter was used about half a millimetre in thickness; and the tube was illuminated with a 100 volt current, so arranged that 5 ampères passed through the primary of the induction coil. This on being measured gave a good Sabouraud dose in rather less than 20 minutes. This current was maintained for six continuous hours, from 6 to 12 p. m., with a short interval at 9 p. m. to soften the tube. This was made up later.

The house surgeon's notes run: "On next day the side of the face was very red, and later some inflammation of right tonsillar region. The temperature rose gradually for three days (Sept. 19th to 21st) from normal to 103.6°, but remained normal on Sept. 25th. There is a very definite recession in the apparent size of the growth. The outline of the jaw can be felt on all sides of the tumour. The ulcerated surface inside the mouth was quite healed on Sept. 25th."

On Sept. 28th a second dose of the same length of time and quantity was administered, being the fourth day of normal temperature. The house surgeon's note runs: "Tumour now feels about the size of a hen's egg and quite hard, arising abruptly from the inferior maxilla. No egg-shell crackling obtained.

On Nov. 9th my own notes run: "The condition now is that all soft parts of the tumour are more or less absorbed, and hence the projection into the mouth, and also on the cheek, is much reduced. The boy can chew and shut his mouth and open it widely. The bony condition is, however, one of considerable expansion still, but harder as though condensing. His general condition is much improved, and he is now lively and boyish. Seen from the foot of his bed, the two cheeks are not dissimilar." On Oct. 29th and again on Nov. 26th, the same dose was repeated, being four colossal doses of 18 Sabouraud doses each.

I have omitted to state that on August 25th and twice a week after, for five times in all, the patient was given single Sabouraud doses during the administration of Coley's fluid. It was the failure of this treatment and that of Coley's fluid that induced me to try such large doses.

The child was now much improved in appearance and had put on many pounds weight. His parent desired to have him home, and he was made an out-patient. Owing to domestic circumstances his treatment was discontinued in December, but on Jan. 14th, 1911, another colossal dose was administered, there being a small lump palpable under a good layer of fat, for he was now fairly "chubby." He did well, and was regarded by his relatives as cured, and was allowed to play in the public grounds with other children.

In the month of May he was brought with the history of being knocked on the jaw by another boy whilst playing. On examination the tumour was much swollen out, and the teeth were kept apart by growth in the mouth as at first. It was hoped the great enlargement might be hæmorrhagic, and cooling lotions were at first applied. Later one colossal dose was given on May 13th, but no marked result followed, and finding that he was likely to sink shortly the mother removed him to her home to die there rather than in hospital. Thus the case ended untowardly, although there seemed every hope at one time that the daring treatment might prove permanently successful.

I have not read or heard of so large a dose being given, but I was driven

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to it by the hopelessness of the case in one so young, and the fact that radium treatment lends itself to prolonged sittings; for whilst radium rays are not X rays nor serve the same purpose, yet there is a similarity. I was also influenced by an expression I saw in the *Archives of the Roentgen Ray,* in which it was stated that "a good kick sometimes does more good than several 12 days prior.

I believe there is a future for this form of treatment, and I have another case of cancer of the jaw undergoing similar treatment. Should others wish to try such colossal doses I wish to urge them to regulate their coils not to exceed in quickness 17 minutes to the Sabouraud dose, to filter with aluminum, and to take the temperature night and morning. One of my difficulties lay with the toxins which were liberated. Unless the temperature does rise no great good seems to occur, but it must be normal when the next colossal dose is given.

I think Coley's fluid did good at first, but the boy soon grew immune to it, and on reaction failing to occur no further benefit ensued. It is noteworthy that single Sabouraud doses given during the treatment by Coley's fluid produced no marked reaction. It seems improbable, then, that the reaction following the first colossal dose was in any way due to Coley's fluid, and none had been given for 12 days prior.

It seems clear that X rays are capable of producing necrotic changes of the cells, by which certain products are liberated which can be taken away by the lymph channels; these, on finding their way into the general circulation, set up febrile action, as large doses of tuberculin used to. It is for us to find out how much of this toxin the individual patient can contend with, and how large a dose of X rays is necessary to liberate the required amount in such cases as prove themselves amenable to this form of treatment.

## EARLY DIAGNOSIS OF INSANITY

Carlos F. McDonald, in the *Medical Record,* finds the significant factor to be a change in the mental characteristics of the individual. Any prolonged change in mental or moral tone should excite suspicion, especially if the patient be of insane or neurotic stock. Among the premonitory symptoms are disturbances of the bodily functions, morbid emotional manifestations, and alterations in the individual's mental traits. Somatic functional disturbances express themselves in various ways—night terrors, insomnia, headache, tinnitus, vertigo, fibrillary tremors, clammy hands and feet, and other vasomotor aberrations, anorexia, indigestion, constipation and so forth. While these phenomena, especially insomnia and constipation, are frequently prodromes, they may nevertheless occur in those who never become insane; they are, therefore, not to be regarded as positively pathognomic.

If the tendency is to mental exaltation or mania, the emotional changes are to unnatural buoyancy, loquacity, undue levity and morbidly quickened mental operations, the patient appearing perhaps unusually bright.

If the tendency is to mental depression or melancholy there are gloomy forebodings, morbid introspection, hyperconscientiousness, senseless self-condemnation, a morbid aversion to friends, morbid suspiciousness, irritability, and perhaps a vague sense of impending evil. At this stage marked alterations of character are seldom wanting; the devout individual becomes profane; the refined immodest and regardless of the decencies of life; the staid becomes capricious and vascillating; the sociable, unsociable; the good-tempered, irascible; the industrious, indolent; the temperate, intemperate; the cheerful, sullen and morose; the level-headed business man embarks in senseless enterprises.

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# THERAPEUTIC BRIEFS.

**Dacryocystitis.—**

The following application will be found of value in inflammation or suppuration of the small distension at the upper end of the lachrymal duct:

Creolini-Pearson .....*m*xv
Cocaine Hydrochlor.....gr. ij
Aquæ rosæ.....fl. oz. iv

M. Sig.: Apply absorbent cotton wet with the solution.

**Tonsilitis.—**

Tr. ammoniated guaiacum.....
Tr. cinchona comp.....dr. ij
Mel .....dr. vi
Potassium chlorat.....Gr. lxxx
Aqua.....q. s. ad. oz. iv

M. Sig.: Gargle two teaspoonfuls every two hours.

**Chicken Pox.—**

Burnett, in the *Medical Summary*, recommends the following:

Creolin .....dr. ss
Glycerin .....oz. j
Aqua .....oz. xvj

M. Sig.: Apply with a sponge after warming to relieve itching.

**Pruritus of the Vulva.—**

For this annoying and frequently intractable affection, Dalche gives, in *Quinzaine therapeutique* for May 25th, the following:

Menthol .....7½ gr.
Guaiacol .....5 gr.
Zinc oxide.....3 dr.
Petrolatum .....1 oz.

M.: Fiat unguentum.

**Insect Bites.—**

The following is an excellent lotion for relieving the pain and irritation of insect bites:

Liq. plumbi subacet.....
Liq. picis carbonis.....aa fl. dr. j
Glycerini .....fl. dr. ss
Spir. rectif.....fl. dr. ij
Aq. flor. aurant.....ad fl. oz. x

M. Sig.: Dab over the parts and allow to dry on.

**Administration of Paraldehyde.—**

Senega is a good emulsifying agent for paraldehyde. The following makes a good emulsion. It is thin, homogeneous, and shakes up easily:

Paraldehydi.....fl. dr. j
Syrupi.....fl. dr. iss
Tinct. auranti.....fl. *m* x
Infus. senegæ.....fl. dr. iij
Aquæ.....q. s. ad. fl. oz. i

M. Ff. haustus.

**Lumbago.—**

H. B. Cole, of Black River Falls, Wis., has found the following, when made of the best ingredients, to be of service in the treatment of lumbago:

Tinct. Iodi.....
Aquæ Ammoniæ.....
Collodii.....aa fl. 3iii

M. Sig.: Apply locally.

**Lead Colic.—**

Magnesiæ Sulphatis.....℥xj
Potassii Nitratis.....℥ss
Acidi Sulphurici.....fl. ℥j
Aquæ Bullientis.....Oij

M. Sig.: A tablespoonful every three hours until bowels move; thereafter in smaller doses.

**Dysmenorrhea.—**

In some cases an inunction with an ointment such as the following may be employed with advantage for its stimulating effects upon the pelvic circulation:

Acidi Salicylici.....
Olei Terebinth.....aa ℥j
Adipis Lanæ.....℥j

M. Sig.: To be applied by inunction at night upon retiring.

**Adenoids in Infancy.—**

Iodi.....grn. ¼-ss
Camphoræ.
Mentholis.....aa grn. ss-i
Benzoinol .....℥j

Sig.: Five or ten drops of this to be dropped in the infant's nose when the child is lying on his back, so that it will drip back into the nasopharynx.

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# BOOK REVIEWS.

INTERNATIONAL CLINICS. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, and Other Topics of Interest to Students and Practitioners. By Leading Members of the Medical Profession throughout the World. Edited by Henry W. Cattell, A. M., M. D., Philadelphia, U. S. A. Volume III. Twenty-first Series. Philadelphia and London: J. B. Lippincott and Company. 1911.

We are gratified to observe that the editor and his collaborators have met and obviated the criticism which we have felt obliged to make of these international clinical series for the past few quarters, namely, that they have surrendered their clinical character to that of the text book or the lecture platform. Not that we flatter ourselves for a moment that our humble criticism had much, if anything, to do with the change. But, whatever has brought it about, it is a welcome change, and carries out the original intent of the series much better than the practice which had become so common of devoting the entire volume to disquisitions and treatises upon various subjects. The present volume is, as it should be, and as the volumes in previous years always used to be, a genuine set of clinical lectures. It is also to be congratulated upon representing a very modern, up-to-date aspect of clinical medicine. The section on medicine is especially rich in progressive clinical lore, and should be of immense practical value to the student and practitioner for whom the series is intended. An interesting and rather novel feature of the volume is the quite modern section on the economies of medicine, consisting of an article on Successful Practice, and another on Economic Conditions Affecting Medical Practitioners. Altogether it is an exceptionally full and satisfying volume in the series.

SYPHILIS. By Hieronymus Fracastor. From the Original Latin. A Translation in Prose of Fracastor's Immortal Poem. St. Louis, Mo.: The Philmar Company.

For those who are in any way enamored of the history and lore of medicine this little book will be a treasure trove. Its translation from the original Latin should not, of course, mislead any one into the idea that it belongs to Latin literature. Hieronymus Fracastor lived in the middle ages, his period being from 1483 to 1553. He held the chair of logic at Padua, and this masterpiece of his, entitled "Syphilis sive Morbus Gallicus," was published at Venice in 1530, winning for its author a place in the front ranks of the great medieval poets. It is from this work that the name Syphilis was drawn. The translation which the Philmar Company gives us is an excellent one. We do not know who is responsible for it, but whoever he is he need not be ashamed of his work. Although done in prose, and in more or less of a literal fashion, it preserves in a wonderful way the swing and sense of the poem. The circulation of the book will necessarily be limited; but, we repeat, those who take an interest in medical lore will eagerly welcome it to their collection.

INGERSOLL. A Biographical Appreciation. By Dr. Herman E. Kittredge. 600 Pages, 8 vo., Illustrated with Photogravures. Frontispiece Printed on Japanese Paper. Eight Full-page Half-tones and Fac Simile Letter. New York: The Dresden Publishing Company. Cloth, $2.50.

It is easy enough, of course, in these days, to lightly estimate the work and influence of Robert Ingersoll. The things for which he stood have nowadays become such current coin that it is difficult to realize that there was a time, within the lifetime of living persons, when it required moral courage to preach

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them in public. Yet such was the case with Ingersoll. In his day he stood practically alone for absolute freedom of the mind in matters pertaining to morality and religion, and, like the prophets of old, he cried aloud and spared not. It is good, sometimes, to hark back to the words and experiences of the pioneers of our liberty, whether it be political or religious liberty. Indeed, one is intimately bound up with the other. Eternal vigilance is the price of liberty, and unless we are frequently taken back to the elementals of the subject, by means of the records of the work of these pioneers, we stand in constant danger of losing the ground for which they fought so dearly and so bravely. Hence this excellent biography of Ingersoll should have a peculiar value at a time when the rights of the people are in so precarious a position as they are today. The scene and aspect of the struggle for liberty have changed since Ingersoll's time, but the principles for which he stood remain. And besides all this, the writings of Ingersoll are masterpieces of English literature—that was recognized even in his own day, when his philosophy was unappreciated; so that the numerous extracts contained in Dr. Kittredge's book, chosen with artistic discrimination, should of themselves make it an invaluable addition to the library of every lover of oratory and poetry.

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THE PRACTICE OF MEDICINE. — By Frederick Taylor, M. D., F. R. C. P., Consulting Physician to Guy's Hospital; Examiner in Medicine at the University of Cambridge and at Queen's University, Belfast; Late Examiner in Medicine at the Universities of London and Durham, and to the Royal College of Physicians, London. Ninth Edition. New York: The Macmillan Company. 1911.

Dr. Taylor is a good man and his book is a good book. The fact it is in its ninth edition in little more than twenty years of its existence sufficiently demonstrates the popularity of the work, and the diligence with which publishers and author have maintained its march with the progress of the times. Like all English books, it is eminently practical and clinical. Symptoms, diagnoses, prognoses and treatment form the prime elements in the consideration of each disease. Etiology and pathology are considered, but not with any particular fulness. Many diseases which are now understood to be of a general or infectious nature are still classified by the author under regional headings, not, as he is careful to explain, because he does not appreciate their wider character, but because he does not regard their true etiology as sufficiently well explained to change their sectional classification. It is, however, a matter of little practical moment, since they are all treated in the broad fashion demanded by our present concepts. The present edition is brought thoroughly up to date, many subjects revised, and not a few new ones added.

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The treatment of prostatic diseases is always a tiresome proposition. It is hard to get at the deep-seated infections and to reduce the hypertrophies, which are so common. Operative measurs are to be feared—they are dangerous and require a skill which every general practicioner has. The internal remedies are not by any means effective, and most methods in general use are far from satisfactory. Impotency—another bugbear—is frequently met and is notoriously hard to successfully treat, but——

Dr. G. H. Robertz, of Detroit, has devised a method of local treatment, which is "simplicity itself." A book entitled "Successful Prostatic Theraphy" explains in detail the importance of this method. It may be obtained upon request from the Regent Drug Co., Detroit, Mich., whose advertisements appears on page

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# NOTES AND MISCELLANY.

## TONSILITIS.

A local remedy for tonsilitis must fill two requirements, says Dr. Chas. J. Drueck. A detergent antiseptic and a degree of permanency of effect. Many of the remedies are antiseptic, but they are not exosmotic enough to increase the circulation, or else their effect is too transient and their use tires the patient. Locally I have grown to use but one remedy and that is Glyco-Thymoline. I prescribe equal parts of Glyco-Thymoline and water to be used in an atomizer. I get better results with this than anything else I have used. I always use it in an atomizer because gargling is necessarily painful, while a spray is not. Glyco-Thymoline promptly relieves the dry congested condition, and by adhering to the tonsil protects it from external irritation. Its anodyne effect is immediate and lasting. I instruct my patient to use it frequently and because it is pleasant and its action prompt, I find that they need no other instruction but use it thoroughly. As Glyco-Thymoline is non-poisonous, it makes no difference as to how much is swallowed and its action does not upset the stomach, but tends rather to assist the destruction of any of the plugs that may be swallowed.

I find by this method of treatment that my cases are nearly all cured in twenty-four to thirty-six hours. That I need no other medicament at all, because the system does not become clogged with toxines.

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## TISSUE NUTRITION IN GRIPPAL CONVALESCENCE.

If grip were free from treacherous sequelæ, the physician could dismiss his grip patient after the acute period of the disease had passed, feeling sure that an uneventful return to health would soon follow. But these sequelæ strike when least expected. The heart muscle fails, with resulting acute dilatation; or a tuberculous taint manifests itself. If it were made a routine practice to insist that grip convalescents take a tissue food of proven merit, such as Cord. Ext. Ol. Morrhuæ Comp. (Hagee), the complications and sequelæ of this infection would not be met so frequently and in less distressing form. Cord. Ext. Ol. Morrhuæ Comp. (Hagee) contains the very elements the drained system needs to restore it to health and vigor, the contained extractives of the cod liver oil, coupled with the hypophosphites of lime and sodium, supplying this need in admirable manner.

* * *

Germiletum is a mild antiseptic solution that may be used with good results in all diseases, wherever an antiseptic solution containing the ingredients of Germiletum are indicated. As Fermiletum is much more concentrated than the general run of antiseptic solutions now offered the physicians, it must be diluted to meet the indications in all orificial work.

In buccal infections, in diseases of the mucous membrane of the throat, Germiletum may be used full strength. For vaginal or urethral douches or injections, dilute and use warm. For hemorrhoids, rectal fissures the astringent properties of Germiletum will give quick relief. Saturate a gauze pad with full strength Germiletum and bind in position. For rectal injections, dilute and use at body temperature. For skin diseases of acid diathsis, use Germiletum full strength.

In general use Germiletum in all perversions of the mucous membrane, catarrh of the nose and throat in solutions as indicated.

In milder solutions as vaginal or urethral or rectal injections, use warm solutions of Germiletum, as it adds to its

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efficacy, but is not essential when used merely as a mouth wash, and in the very many ways in which a disinfectant and deodorizer can now be used.

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## CEREBRO-NERVOUS AFFECTIONS OF WOMEN.

Prof. Chas. J. Vaughan, Chair of Gynæcology, Atlanta College of Physicians and Surgeons, writes: "Neuralgia constitutes the great cause of danger from the employment of hypnotics and narcotics, which only afford relief by numbing, but effect no cure. On the other hand, the formation of a drug habit rather aggravates the condition from which relief was originally sought. Neurasthenia, neuralgia and other manifestations, either of an active or passive character, are common and are always peculiarly rebellious to treatment. Cerebro-nervous affections peculiar to women associated with pathological disturbances of the reproductive organs are legion, and most trying to physician and patient. I have found nothing so well suited to these cases as Antikamnia Tablets, administered in doses of from one to three tablets and repeated every one, two or three hours, according to the attendant's judgment. These tablets afford complete relief without fostering a drug habit and their exhibition is attended with no unpleasant after-effects. For the relief of painful menstruation there is no combination of remedies so generally successful as Antikamnia and Codeine Tablets. Their sedative, analgesic and anodyne properties especially commend them in the neuralgic and congestive forms of this distressing affection."

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## LITERATURE WORTH READING.

The value of heat as a therapeutic agent has been so conclusively proven that it will admit of no further argument.

The difference, however, between convective heat in contra-distinction to radiant heat is a subject in which the profession generally is interested.

Convective heat is particularly applicable in cases where radiant heat is not indicated and the reverse is quite true. Their differential thermic value is clearly set forth in the October issue of the *Bloodless Phlebotomist* along with an interesting paper by Dr. David MacIntyre, a Cunard Surgeon, upon "Drugs at Sea."

In the same issue of the Phlebotomist, Dr. Edward Parrish of Brooklyn, presents his methods of treating Tic Douloureaux and Dr. Leverett of Yonkers, relates his experience in the successful handling of ivy poisoning cases, which in many instances are quite as intractable to handle as Tic Douloureaux.

In addition to these papers, much other interesting and instructive material is given, and it is worth while to write to The Denver Chemical Mfg. Co., New York, for a copy of the *Bloodless Phlebotomist* for October, which they will send upon request.

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## THINK IT OVER.

Read the advertisement on another page of this journal, of the Marvel Co. of New York, and then sit down, when you feel in the mood, and draw upon your experience with the "Therapeutic Value of the Vaginal Douche."

You may win a prize; if not, you will have aided your other physicians by giving them the value of your knowledge and opinions.

The competition is open to every physician and will be absolutely fair to all.

The most valuable articles will be collected and published for distribution among physicians.

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"I can say out of a full heart that the Micajah Uterine Wafer is the most satisfactory single agent in all gynecological disorders that I have found in thirty years practice. They are neat, efficient and economical. You are at liberty to quote me for I mean what I say.

DR. B. F. BERRY, Kansas City, Mo.

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### DIGITALIS.

Digitalis is one of the drugs with which the profession is unable to dispense. It is the sheet anchor to which we pin our faith in many heart affections and the instrument that enables us to tide over many a critical moment in acute disease. Unfortunately one can not always place much reliance on the galenical preparations of the drug. Digitalis leaves vary in glucosidal content in different seasons, in the same crop, even in the same field. The country practitioner has great need for drugs that are reliable in composition and certain in effect. Aid is not always forthcoming and the absolute reliability of his armamentarium is a "sine qua non!"

Digalen, manufactured by the Hoffmann-La Roche Chemical Works, has filled the breach. It is a sterile solution of digitoxin amorphous (Cloetta), suitable for administration by mouth, rectum, deep intramuscular or intravenous injection. Digitoxin is the most important of the glucosides of digitalis, the amorphous form being much less toxic than the crystalline. It has no irritating effect on the mucous membrane of the stomach and is practically free from cumulative effects, when used within the physiological dosage, 1 c. c. (16 m.) represents 1/222 of a grain of digitoxin amorphous. The dose can therefore be "standardized" to each individual case once the physiological action is obtained. Owing to its exactitude of dosage it can safely be employed in the cardiac diseases of children. When given internally it should be administered on an empty stomach. and it should be remembered that in an acid condition of that organ the glucoside is very apt to be split up and become innocuous.

Digalen is indicated in pneumonia in the asthenic stage, when the heart needs supporting and the physician's chief anxiety is to keep the heart "going strong." Similarly in acute infectious fevers, in the tachycardia of exophthalmic goitre, loss of compensation following chronic endocarditis, as a diuretic in dropsy, and in any affection where it is necessary to tone up the heart muscle, Digalen will prove reliable and efficient. In chronic diseases in which hyperleucocytosis is present, the action of Digalen in producing hyperleucocytosis in a marked manner is worth remembering.

The average dose is 8 to 16 M. (½ to 1 c. c.) 3 times a day. In chronic conditions the necessity of each individual case must be considered, after the physiological effect has been once established. The intravenous injection manifests its action within a few minutes. When given by the mouth the effect is much slower and takes 24 to 36 hours to obtain *full* effect, and this is an important fact to remember in treating acute affections.

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### EXTERNAL EYE DISEASES.

The most frequent forms of diseases of the eye are those located in the mucous membrane of the eyelids, (conjunctiva). When left alone they are not only a source of annoyance and suffering but often endanger the sight. The frequency of these external affections of the eye has made their treatment one of the richest mines for quacks from the oldest times. All general practitioners of medicine are frequently called upon to treat these diseases, which they can do successfully with perfect safety and not be under the necessity of sending their patients to the Oculist. It will be readily recognized from the formula of Palpebrine that it is composed of ingredients of no untried remedies but of such as are entirely reliable in the treatment of all external eye diseases. No detrimental effects can come from its ure ad liberatum. Palpebrine is superior in its action to the remedies now in use. It contains all the constituents of Aqua Conradi, which is recommended by the renowned professor of the Vienna University, Ferdinand von Arlt (see Clinical Studies on Diseases of the Eye, by F. Ritter von Arlt, translated by L. Ware, page 23.)

The Dios Chemical Co. of St. Louis, Mo., will mail free sample with formula and literature on application.

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# The Medical Brief

A MONTHLY JOURNAL OF PRACTICAL MEDICINE.

Vol. XXXIX St. Louis, Mo., December, 1911. No. 12.

## EDITORIALS.

### RELATION OF THE LABORATORY TO MEDICINE.

A MOST interesting and instructive address was delivered at the recent thirtieth annual meeting of the Ontario Medical Association by Professor Norman MacL. Harris upon this subject, full of pregnant suggestions and significant truths. Incidentally Professor Harris pointed out, what is so frequently overlooked by the teachers, and even the workers in medicine, the enormous debt incurred by medicine to the other departments of natural science—to chemistry, physics and biology, and even to that least natural and most arbitrary of all sciences, mathematics. But the bulk of his remarks was addressed to an attempt at defining and determining the exact role that the laboratory plays in the practical aspects of modern medicine.

The speaker enumerated four prime functions fulfilled by the laboratory in its relation to medicine, namely, the inductive method of the impartation of knowledge, the cultivation of powers of observation, the application of science to problems in hand, and the opportunity for research and experiment. He believes that the didactic lecture in the course of the medical student, so far from playing the entire role as the impartor of knowledge, has in these modern days assumed the humble duties of handmaid to the laboratory course; and he commends it as fostering the spirit of research and perhaps even gaining some recruits for the task of serious investigation. He points out that the methods employed in laboratory work tend to cultivate in the student habits of accuracy, carefulness and thoroughness which are destined to last him throughout his career, whether as a physician or as an investigator. He emphasizes the importance of an application of all that is known in the realm of exact science to the problems of medical practice, and warmly commends the numerous provisions made, both in city and country, for this practical use of the laboratory. And finally he declares that the laboratory more than justifies its existence in constituting the great testing place of ideas and theories, whether coming from within its own walls or from those outside.

With these characterizations of the laboratory we, in the main, most cordially agree, nor would we be supposed to offer the least criticism either of Professor Harris' subject-matter nor of his way of presenting it. We do, however, desire to point out that the very attributes of the laboratory which he specifically commends (and which we commend, too) have each of them an equally specific and emphatic danger. The cultivation of the inductive method of imparting knowledge, if carried to excess, destroys the power of imagination, without which all knowledge is barren and valueless. The cultivation of the powers of observation, to the

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exclusion of the faculties of logical analysis, leads to a slavish dependence upon and bondage to sheer facts, as though facts of themselves represented the truth. The rigid application of the laws of science to problems in hand, if pressed to extremes, shuts out of consideration the "unknown" factor which enters into every problem of medicine. And the spirit of research and investigation, excellent as it is in its proper place, is a dangerous thing in small quantities, being just enough to disturb a practical mind and not enough to make a good investigator.

The whole situation may be summed up in the comprehensive statement that the laboratory represents the inductive viewpoint of medicine. Now the inductive method, in any department of knowledge and work, is a most useful and valuable phase, if one bears constantly in mind its limitations and dangers. But induction has never created a single idea worth mentioning. It is not in the nature of induction to be creative. All creative movements have been deductive in their origin. The creators in science, big and little, have always been the men who, having marshalled and classified their facts, have said, "These facts do not account for the situation—there is something beyond them to which they are mere contributors, or from which they spring." The inductive aspect of things is, after all, a barren aspect. Induction is, in the end, merely a check upon deduction.

Thus regarded, we heartily endorse all that Professor Harris, and others before him, have said concerning the value of the laboratory in medicine. Our readers know that we have consistently and persistently advocated the utilization of the laboratory and its methods, both in and out of school. But we feel constrained to point out, as a certain great mathematician did of mathematics, that you can get no more out of the laboratory than you put into it.

## THE PASSING OF NEURASTHENIA.

NOTWITHSTANDING that the text books on nervous diseases still persist in giving several pages to serious discussion of neurasthenia as a functional disease of definite entity, the concensus of opinion among intelligent medical men seems to be setting rapidly toward the conviction that there is no such independent condition. And we believe the majority opinion is correct. There does not seem to be any more warrant for regarding neurasthenia as a distinct disease than for giving headache or indigestion a separate place in the list; and, as a corollary, there does not appear to be any more sense in dosing supposed neurasthenics with cerebral and nerve sedatives than there is in masking pain with opiates or bracing up the dyspeptic with "tonics," in the fond delusion that the trouble has thereby been remedied.

Indeed, there is far less warrant for the one conception than for the others. For it is quite conceivable that a headache might, in certain instances, result directly from a temporary congestion or anemia of the cerebral tissues, and thus be amenable to a simple remedy directed toward these conditions; and it is wholly possible that an attack of indigestion might represent a temporary inability of the stomach function to cope with an extra load, which might very well be tided over by the application of a therapeutic whip. But to suppose that the entire nerve system can be functionally exhausted, as a primary pathological condition, is a fallacy which does not even require any special technical knowledge of pathology to discern, but only a common-sense appreciation of the biologic history and status of the nervous system.

Let us hypothecate the case of a highly organized, civilized community, in which, some fine day, it should be found that the telegraph and telephone systems

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were out of working order. A thorough line test shows that there are no breaks in the circuit, no wires down, no grounding, no exposures, nothing, in short, structurally wrong with the lines. Assuming that the operators themselves are attending to their business, there can be but one cause for the deficiency in the working of the line, namely, that there is either an inadequate supply or an improper distribution of the electrical fluid, or, as the line-man vulgarly calls it, the juice. But that is not a primary defect in the telephone system; in fact, it has nothing directly to do with the system. It is a fault of the batteries and the persons whose business it is to replenish and distribute them.

Precisely the same thing is true of the nervous system. If there is an organic break in the mechanism, then, of course, the trouble is not neurasthenia, but an organic nerve disease. If there is no organic lesion, as demonstrated by the definite and exhaustive tests at the command of the modern diagnostician, then the only conceivable trouble with the nervous system is either a deficiency or an improper distribution of the nervous income. But this is not primarily a matter of the nervous system at all. That is precisely the point to which we are leading. The nervous system, of and within itself, originates nothing. It is, like the telephone system, merely an agency of transmission and transmutation. It is not, as is popularly supposed, even among medical men, a furnisher of motive power to the body. It only transmutes and transmits motive power. It is but a system of communication.

The nervous system receives its motive power from exactly the same source as every other tissue-system of the body, namely, from the combustion of carbohydrates by oxygen; that is to say, from body metabolism. Neurasthenia, therefore, is not an expression of defective nerve functionation, far less of defective nerve structure. It has primarily nothing to do with the nerves at all. It is the expression of a deficient, or badly ordered, metabolism, due either to some single definite leak or to a general disturbance in the metabolic economy. The practical significance of which truth is, that the direct sedation or stimulation of the nervous system, as represented by the routine use of the opiates, on the one hand, and strychnine, on the other, is irrational treatment for neurasthenia. The profounder significance, that neurasthenia is but another name for metabolic deficiency or shiftlessness, against which the neurotic conditions are simply a protest, similar to the protest of a workman with poor tools. Unfortunately a diagnosis of neurasthenia is too often a cloak for ignorance or carelessness which neglects to seek the underlying cause.

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## JOHN HUGHLINGS JACKSON.

THERE recently died in England a great scientist—one of the truly great men of medicine—whose latter years have been spent in such retirement and quietude that most of us were hardly aware that he was still with us up to the time of his death—John Hughlings Jackson. Indeed, it is more than likely that a great many of us had long ago lapsed into the negative habit of never giving the man a thought, albeit we were every day availing ourselves of the important work that he had done in the field of medicine. In his death neurology has suffered a loss which it would be difficult to exaggerate. It is now something more than half a century—more than the lifetime of many of us—that Jackson entered the unexplored region of neurology as a pioneer, and set himself, quietly and resolutely, to illumine its recesses, as the *Lancet* says, by an unparalleled series of researches, conducted with unflagging zeal and enthusiasm, and animated by a rare scientific spirit."

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It is hardly too much to say that all we possess today in the way of a guiding thread to the labyrinths of modern neurology we owe to the work of this exceptional man. It is not alone the actual fruits of his own labor that he has bequeathed to the present generation of medicine, but the spirit and method of thinking and working in neurological science. As to his actual accomplishments, one has only to recall that it was Jackson who propounded the theory of "levels" in the central nervous system, who established once for all the respective functions of the cerebral cortex and the cerebellum, and who demonstrated the type of epileptic spasm which still goes by his name, to realize something of the depth and breadth of scope embraced by his tireless research. As to his general influence upon scientific neurology, one has but to stop a moment and consider the spirit and methods of modern neurology to grasp the wonderful change this man has wrought.

Perhaps the most valuable thing about John Hughlings Jackson was the man himself. He was an ideal scientist, modest, hard-working, painstaking, tolerant, considerate of others, critical of himself. In his later years, we are told, he was accustomed whimsically to remark that he was afraid the younger generation of investigators would "find him out," and, says the *Lancet*, "he *was* 'found out,' but not in the sense that amused his fancy." The younger generation has gratefully and gladly adopted practically every view that he propounded, every condition that he demonstrated, and made it a permanent part of medical science.

As a teacher Jackson was excelled by none and equalled by few. The *Lancet* publishes verbatim the testimony of one of his pupils, Dr. F. J. Smith, to this phase of the late neurologist's work and influence, and we can do no better than reproduce it:

"The death of Hughlings Jackson takes me back in memory to the days when I first clerked under him in the very early 'eighties' of last century, when he had already gained great renown as a (perhaps the) leading neurologist, and consequently excited most reverential awe in the minds of us students, to whom his powers of diagnosis seemed little short of marvelous. We loved to go round with him because we felt that what he told us was true and was the outcome of real clinical observation, coupled with sound deduction, and not a mere quotation from others; for, indeed, we could find but little in our text-books that could compare with his teaching, or, rather, with which we could test his words. This must have been our reason, though, perhaps, we never admitted it to ourselves, for it would be idle to suggest that he talked freely, or in what would now be considered the correct fashion; we had from him no detailed results of examination of spinal fluid, no occult views on the precise methods by which nerve degeneration occurred, nor upon the precise meaning to be attached to every detail of a microscopic field; but we did get a knowledge of how to test reflexes, and of the significance to be attached to their increase or decrease, and of how to differentiate between their real and their apparent alterations. How we relied, too, upon his opinion as to whether optic neuritis was or was not present! In those days the ophthalmoscope was almost a novelty, and it became our ambition (never fulfilled by the way) to discover optic neuritis before Jackson did, and to draw his attention to its earliest appearance. It was, I think, by his appreciation of these our endeavours to tell him something we had discovered, that he attracted our love as well as our admiration, for it never could be said that his teaching or manners to us were attractive in the showy sense of the word."

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# Psychology and Business*

DR. AXEL EMIL GIBSON, Beaumont, Calif.

NOT SO very many months ago, in an editorial on the limitations of psychotherapy, we pointed out that the very essence of the power of suggestion lay in the substitution of one will for another—a principle which carries on the face of it an irreconcilable antagonism to the development of the patient's individual will. We are gratified to find our view of the matter upheld in this article of Dr. Gibson's. The entire article is a most timely and sensible "call-back" of the subject of psychology to the normal, wholesome bounds that it ought to occupy. To quote the author, "where love and duty are brought into their widest and fullest range of action, the result will be a psychological reaction toward raising virtues and moral qualifications."

### I. Is Suggestion and Hypnotism Identical?

"By suggestion," says Mr. Bruce, "is meant nothing more than the implanting of an idea so skillfully in another's mind, that it disarms opposing ideas and tends to realize itself in action."

If "Suggestion" means this—and we have no reason to doubt the correctness of the definition—its range of dominance is immense and inescapable. It is back of the hypnotic control, mental coercion moral surrender, subjection of personality, and the whole chain of influences that make or break character and individuality. In other words under the sway of "Suggestion" an individual's judgment, standard of virtue, recognition of judicial property, etc., are reduced into unstable qualities, depending for their meaning and practical value on the power by which the stronger mind may so "skillfully implant an idea" in the weaker, that the latter, being "disarmed in opposing other ideas, tends to realize the influence in action."

Whether awake or asleep, a person thus "disarmed," with his mind invaded by "implanted" ideas, and his action the realization of these alien ideas, is in the grip of a force which bears all the outer and inner marks of well-authenticated hypnotism.

Recognizing with Prof. James R. Coche—a prominent writer and authority on the subject of Hypnotism—that "Hypnotized minds give evidence of an uncitical and unantagonized acceptance of all commands and requests, due to an inhibition or lowering of will power and conscious resistance;" and with Dr. Worcester—another well qualified authority on Hypnotism—that "from 80 to 90 per cent of all persons, regardless of moral equipment and force of will, are hypnotizable," it must be admitted by sheer force of logic that the practice of any form of hypnotism, not only weakens the development of individuality and character, but may serve as a most fatal agency towards the furtherance of criminal design. In other words, the employment of Hypnotism, as a force in business, means to place in the hands of the selfish and unscrupulous, a lever of power capable of breaking up any mental or moral reserve; turn prudence of investment, economy in expenditure, carefulness in conversation, faithfulness to principle, etc., into mere toys or implements in the hands of vice, averice and despotism.

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### "Psychology in Workmanship."

"It is now known," says Mr. Bruce "that success in any calling depends on something more than industry, training and interest in one's work," and in con-

*Reflections due to an article published in *New York Outlook* by H. Addington Bruce.

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nection with this statement he proceeds to show how successful business requires, besides the above qualities, a psychological fitness of the workman for a particular task.

But if what has been called the "psychology of selling," by its continuous hypnotic injections or "implantings" of ideas in the minds of the buyers, is likely to overthrow the moral standard of society—the "psychology of workmanship," through its coercion of the minds of the workmen into fixed and stereotyped attitudes, may with no less likelihood, degenerate the great army of industrial wage-earners into a commonwealth of mental automatons.

"Psychological Laboratories" have of late been organized for the purpose of ascertaining the critical limits for the power of individual reaction to certain mechanical processes. A "time and motion" standard is prepared by which the efficacy of technical "survival value" of a workman may be brought to a crucial test. These laboratories provide an opportunity for the industrial rulers of the country to secure a workmanship, which, under the strain of a constantly intensified "time and motion standard," will yield the greatest momentum of energy to the smallest measure of time. Workmen are trained to center their entire soul-energy on a particular movement of mechanic parts such as rotating wheels, moving shuttles, tripping hammers, rolling balls, etc., and to react psychologically with unswerving accuracy to the lightening-swift perception of any flaw in the structure or material of the industrial output.

The motive for this psychological training is not so much the accuracy of the workmanship itself as the *time* required for its execution. Allusions are constantly being made to the *profit* accruing to the manufacturers who have patronized the Psychological Laboratory in the selections of operatives. An instant is mentioned by Mr. Bruce in a New England factory, where the dividends of the stockholders, by an application of "the time and motion" standard, had increased 25 per cent. But the enforcement of the new standard meant the discharge of about one hundred factory girls, whose work as to quality and accuracy, had already won to the factory a national repute. But their "Psychological reaction" failed to come up to the required "time and motion standard," and the fate of the girls and their dependents could not of course be considered in view of the new source of profits available to the company through the change.

Yet a development to be of evolutionary value must include not *one* part of the individual only, but *all* his parts. One-sided training is worse than none. An overgrown member or function in a system is as fatal to harmonious development and systemic, health-conditioned poise, as a neglected one. True manhood means universal manhood—a manhood involving every function or faculty of human nature; and the standard for true and enduring genius lies in the equalizing and harmonizing development of every man-making quality and characteristic. The world's greatest geniuses —the Michael Angelos, Shakespeare, Goethe, Lincoln—were men in which the whole, full-orbed individuality was brought into play. "A chemist," said M. Geoffry de St. Hilair—"no matter his learning, if only a chemist, is not even that."

The greatest of all efficiency and most likely to bring the greatest results, is love and honesty applied to the work; while the strongest and most reliable of all "psychological perceptions" with its "time and motion" reaction, is yet to be found in a high sense of duty. Leonardi da Vinci is said to have prepared himself at the beginning of every grand masterpiece by devoting a full hour to

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fervent prayer; and Martin Luther, overburdened by excess of extra labor, set aside an extra hour for prayer to gain the required strength and efficacy of mind. Where love and duty are brought into their widest and fullest range of action, the result will be a psychological reaction, not only toward efficiency in raising financial profits to stockholders, but, what is vastly more important, in raising the virtues and moral qualifications, indispensable in an orderly and safe development of human society.

**The Biological Aspect of the "Psychological Laboratory."**

The difference between the biological and "psychological' process with regard to individual development lies in the fact that in the former, the individual is made to respond to his environment, while in the latter the environment is made to respond to the individual. In other words, in the biological process the environment has value only for the sake of individual development; in the "psychological" process the individual has value only for the sake of the environment itself.

In natural evolution the presence of ever shifting, ever disappearing and eternally re-appearing chains of environment, serves as means and instrumentalities for the bringing into play, not only already present traits and characteristics of the entity, but also tendencies and powers not yet developed. And to help evolution onward in this scheme of natural perfection we institute cultural, agricultural or horticultural agencies, as for instance, rotation systems, irrigation, fertilization, hot-beds, colored lights, electricity, etc., by which the entities of evolution are stimulated into an advance of a variety of biological traits and functions.

When on the other hand the entity is left to remain *in status quo,* degeneracy at once sets in. Every one-sided development, in which a single function is depended upon to sustain the life and growth of the entity, the result is degeneracy. It is not only in the development of acquired characteristics that the play of environment is aiming, but in the quickening into functional power of germinal or elemental possibilities.

Applying this principle of evolution to the processes of the "Psychological Laboratory," we perceive at once the failure of the latter as a cultural agency. In holding down the individual to certain stereotyped tasks, we give a deathblow to his general development. In place of rounding out his individuality into functional harmony by quickening into virile power the rich, many-facetted possibilities of his dormant and undeveloped nature, the Psychological Laboratory method saps his mental, moral and physical vitality to sustain into a one-sided, isolated intensity of expression, a certain, already well-developed and prominent faculty.

If Psychology is to be trusted as an educatory factor, its object must be to equip the individual not to a fitness for a certain single, technical function, no matter its renumerative value to the stockholders, but to a fitness for every useful function of life; not only toward a utilization of already advanced virtues and attainments, but rather toward a transforming of the overgrown fields of vice, into culture-grounds of practical virtue. The deeper aim of evolution is not the survival of the fittest, but the survival of the unfit.

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Two new negro men came up to the outskirts of a crowd where a candidate for office was making a campaign speech. After listening to the speech for about ten minutes one of them turned to his companion and asked:

"Who am dat man, Sambo?"

"Ah don't know what his name am," Sambo replied, "but he certainly do recommend hisself mos' highly."

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# Reciprocal Ion Action In Tubercular Subjects.*

By EMMETT D. PAGE, M. D., LL. B., Brooklyn, N. Y.

Attending Physician to Brooklyn Home for Consumptives; Attending Physician to Out-Door Department Diseases of Women and Children, St. John's (Episcopal) Hospital.

DR. PAGE has been making a series of experimental tests of the effect of treatment in tuberculous cases by the use of co-active magnetic wave generators. The principle of the treatment is the application of a force closely resembling the vital force to the prevention of loss of vitality and the promotion of body resistance. The standard of the test was the blood count. The author does not pretend that the results are final or epoch-making, but they certainly constitute a valuable contribution to the study of this all-important subject—an original contribution for which we owe Dr. Page a debt of gratitude.

During the latter part of a service of over twelve years in the Brooklyn Home for Consumptives, we made a series of blood tests, both before and after treatment in several cases of tuberculosis, by the use of therapeutic co-active magnetic wave generators, and thought the results worthy of presenting to the medical profession.

The principal object of this paper is to make known a physical remedy possessing a close relation to organic forces for checking the rapid loss of vitality which occurs from the invasion of tubercular bacilli, and which may as progress develops along the lines as hereinafter set forth, lead to the destruction of the germ itself.

Connected with the dissipation of cellular energy is the formation of certain cells denoting the different stages of this most baffling disease. For the purpose of arriving at a clear understanding, we will start with the state of the blood in health (male) as possessing 5,000,000 red blood cells to the cm., 90 to 100 per cent. hemoglobin and 10,500 white cells.

Case No. 1, that of Mr. T., age 41 years; family history negative. Blood examination made on September 2nd, 1908, and September 29th, 1908. During this week's treatment, which the patient received daily while sitting in a chair with magnetic wave generator under each arm, with emanations of maximum intensity in close proximity to each axilla, and with more feeble emanations extending in a wider area, the effect was that of a stimulating influence. On examination of the blood on September 22nd, we found hemoglobin 55 per cent. red blood cells 3,100,000; white cells 3,000; the red cells poor in color and form and the leucocytes disintegrating (leucopenia).

The pathological count showed as follows; normal red cells 23 per cent. crenated cells, 70 per cent. microcytes 2 per cent.; Poikilocytes, 5 per cent. lymphocytes, 5 per cent. mononuclears, 11 per cent. polymononuclears, 81 per cent. Eosinophiles, 3 per cent. Here was to begin with, a decrease of 35 per cent. to 45 per cent. of hemoglobin, and 1,500,000 red cells, together with 7,500 white cells, per cm.

The second examination, and after the week's treatment, showed a gain of 3 per cent. in hemoglobin; 50,000 red cells and 2,500 white cells, with the red cells still poor in color and form but the leucocytes were active.

There was also an increase of 8 per cent. in normal red cells, bringing it up to 3 per cent. and decrease of 5 per cent. in crenated cells, an increase of 6 per cent. in lymphocytes, and of 8 per

*Read before the New York Medical League, May 15th, 1911.

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cent. in mononuclear cells, with 2 per cent. increase of mononuclear transitional cells; a decrease of 13 per cent. of polynuclear cells and a decrease of 1 per cent. eosinophiles.

The test of the treatment upon this patient showed a marked improvement in the normal elements of the blood, and a decrease in the abnormal elements, with a corresponding improved condition generally.

Case No. 2, Mr. B., aged 45 years; family history negative; sputum examination showed many bacilli present.

First blood examination was made October 10th, 1908, showing 55 per cent. of hemoglobin, 3,000,000 red cells; 5,900 white cells, with red cells poor in form and color, and the leucocytes dormant.

Patnological count shows: normal red cells 22 per cent. crenated cells 78 per cent. eosinophiles 2 per cent. neutroclears 16 per cent. polynuclears 72 per cent. easinophiles 2 per cent. neutrophiles 60 per cent. of the polynuclears.

The second examination was made one hour after the first one, during which time the patient received one full hour's treatment by the magnetic wave. The hemoglobin and red cells remained stationary, but an increase of 1,100 white cells is recorded and a tendency towards phagocytic action in the white cells was observed in the blood after the hour's treatment. A remarkable difference is noted in the percentage of normal and crenated cells. Viz., from 22 per cent. normal, to 45 per cent. normal, and 78 per cent. crenated cells to 55 per cent. crenated cells. In this case we also note 5 per cent. increase in lymphocytes; 8 per cent. mononuclears, together with a decrease of 14 per cent. of polynuclear.

The neurasthenic tendencies have been decreased in this case as shown by the loss of 1 per cent, of eosinophilic myelocytes.

The second examination showed haemoglobin and red cells stationary, with red cells better in form and color and an increase of 1.100 white cells, 23 per cent. normal red cells, 5 per cent. lymphocytes, 8 per cent. mononuclear transitional cells and a decrease of 23 per cent. crenated cells; 24 per cent. polynuclear cells; 1 per cent. eosinophiles and 20 per cent. neurophiles of polynuclears.

There was no food or medicine given for twelve hours before these examinations which were made early in the morning so that the treatment could be more free from any other influence.

Case No. 3, Mr. N., aged 27 years, family history not traceable. The sputum examination showed a large number of tubercle bacilli. Blood examination on September 22nd, 1908, showed hemoglobin 70 per cent. red cells, 3,800,000; white cells, 4,500.

Pathological count showed, normal red cells 69 per cent. crenated cells 29%; microcytes 2%; lymphocytes, 9%; mononuclear 16%; polynuclear 71%; eosinophiles, 2%; and neutrophiles 50%.

The patient received fifteen to thirty minutes' treatment daily and states that he feels stronger, experiencing no bad effects. The second examination was made one week later, September 29th, 1908, and showed the following improvements; 2% in hemoglobin, 1,500 white cells, and red cells better in form and leucocytes active.

In this case like all others a phagocytosis, although a mild one, is established, and a gain of 2% lymphocytes, 8% mononuclears; a decrease of 10% of polynuclears is recorded.

The neurasthenic tendencies in this case are also lessened as in case 2.

Case No. 4, Mr. B., aged 63; family history negative. This patient, as in case 2, received no food or medicine during the twelve hours preceding the treatment and examinations, which were made one hour apart on October 10th, 1908.

First examination showed 60% hemoglobin, 3,300,000 red cells and 8,100 white

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cells. The red cells were poor in form and color, with leucocytes aged and inactive.

The pathological count showed normal red cells 45%; crenated cells 53%; poikilocytes 2%; microblasts, 2%; lymphocytes 11%; mononuclear, 21%; polynuclear, 64%; eosinophiles, 2%; neutrophiles 50%; polynuclears. After one hour's treatment we find an increase of 10,000 red cells; 900 white cells, and some phagocytic action.

The normal red cells have increased 15%, and the crenated cells decreased 13%.

An increase of 2% lymphocytes; 7% mononuclear (phagocytes) and a decrease of 9% polynuclear. In this case kariokynetic processes are observed by the appearance of 2% transitional mononeuclear leucocytes.

Case No. 5, Mr. F., aged 56, gives a negative family history and had been ill three months. He had short periods of magnetic wave treatment from September 11th to October 31st, 1908, feeling increased strength at times. The first blood examination was made on September 22nd, 1908, and the second one on September 29th, 1908, one week later.

First examination shows hemoglobin, 70%; red cells, 3,750,000; white cells, 4,000. Red cells fair in color and form, with leucocytes dormant; pathological count shows, normal red cells, 60%; crenated cells, 34%; poikilocytes, 6%; normoblasts, 1%; microblasts, 1%; basophilic stippling, 1%; lymphocytes, 7%; mononuclear, 16%; polynuclear, 75%; eosinophiles, 1%; neutrophiles, 50% of polynuclears.

The second examination, made September 29th, 1908, showed after three hours of treatment during the week between the two examinations, increased strength of the blood meantime, as follows: An increase of 50,000 red cells, 3,000 while cells, and while the first examination showed the leucocytes to be inactive (no phagocytosis) the second examination shows established phagocytosis.

We find an increase of 3% lymphocytes, 6% mononuclears, and a decrease of 10% of polynuclears, rendered so by phagocytic action.

To recapitulate: we found in the beginning and at the time of the first examinations, an average decrease of 29% of hemoglobin, which after treatment showed an average increase of 2% and was evidenced by much improvement in the color of the blood, though both form and color were far below normal at the time of the second examination and after this treatment.

We found an average decrease of 1,608,400 red cells per cm. at the time of the first examination, and note an average increase of 22,000 red cells following treatment.

On first examination, we find an average decrease of 50% of white cells, reducing the normal number of 10,500 per cm. to an average of 5,300 per cm. Treatment increased the number of white cells 1,720 per cm., or an average of 32% from the state we found the patient when treatment began.

In every instance we find the leucocytes, though dormant, were made active by treatment.

These improvements are of a very important nature and show the great benefit to the blood therefrom, increasing it in the power to resist the toxic effects of the disease and its encroachment upon the patient, some of whom had received the treatment some time before these tests were made, which fact tends to lessen the percentage of registered improvement.

In the pathological count: starting with the normal blood cells at 100%, we find from 22% to 69% present at first examination, which represents a loss of 281 out of a possible 500 total for these five cases.

After treatment we find a gain of 58

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points, or 13% of the normal red cells. This is a marked improvement.

We also find present at the first examination a large per cent of crenated cells, varying from 25% to 78%, and after treatment, we find a decrease varying from 26% to 65%, or an average of 12%, which shows a decided improvement over the condition preceding treatment.

On first examination there was present an average of 8-1/5% of lymphocytes, and after treatment a change to 11-4/5% was noted, showing an increase on an average of over 3%.

The mononuclear cells present at first examination were an average of 16%, and after treatment they were found to be 23-2/5%, an increase of 7-2/5; which adds greatly to the resisting power of the blood from toxic effects of the disease.

The polynuclear cells present at first examination were on an average of 72-2/5%; and after treatment they were found to be 61-2/5%, a decrease of 11%.

On first examination the eosinophiles present showed an average of 2%, and after treatment it was an average of 1-3/5%, showing an improved condition of the nervous system.

In each case there seems to have been an improvement in the normal conditions of the blood elements, more marked in some cases than in others, and also a decrease of the abnormal elements, resulting in a greater resisting power of the blood as to the toxic effects of the disease and accordingly benefiting the patient.

All these experiments were made with the patient in the advanced stages of the disease, therefore at the greatest disadvantage, and the results of earlier treatment must naturally prove far more decided than these and we shall later make additional reports upon cases treated in the early stages thereof when we look for correspondingly better results.

I cannot at this writing lay down a schedule of dosage of the magnetic wave treatment that may be relied upon in every case of tuberculosis, as the intensity of emanations and time of application depends upon the state of the blood as shown by examinations, and I may add that it is highly important at all times to hold the cell potential, in the process of phagocytosis well in hand to avoid reaction which is possible to occur in advanced feeble cases by producing these changes in the broken down cells with a greater rapidity than the eliminatory resources of a somewhat depraved condition of the patient's system will care for by elimination. However, the unit of this radio-active magnetic wave principle can be modified by an arranged electrical mechanism for the purpose and subsequently applied as the improved condition of the patient indicates.

For the purpose of determining the effect of this varying radio-active influence upon the tubercle bacilli, located in deep seated lesions, my initial investigations are under way with a view of ascertaining to what degree the virulence of the germ can be lessened while imbedded deep in a culture medium, and if its potential power should show a marked decrease, then why not hope for making further progress in its complete destruction.

It seems that by clinical data upon the subject that this radio active magnetic wave principle possesses a wide range of influence toward normalizing functions of some of the principal organs of the body economy, and to make its virtue more therapeutically comprehensive toward increasing the vital resistance to fight tubercular bacilli toxic invasion. Let us take into consideration the probability of the sympathetic nervous system, having complete control of every atomic cell, being distributed to each and every tissue, capillary, tube, lymphatic vessel, gland, blood vessels

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and muscular fibre throughout the body, and directing motion, sensation, tissue building, elimination, waste and repair, and view the importance of an agent that may be scientifically of delicate transition along the lines of its course, from origin to termination.

If in reading this paper we have caused a decision on the part of any to further research in a field that promises so much for the effort and consequently for the good of the public in controlling the ravages of the disease under discussion, we shall be gratified, and bid the student of medical research a kindly Godspeed.

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### TREATMENT OF MISCARRIAGE.

Young and Williams, in the *Boston Medical and Surgical Journal,* present the following conclusions:

1. Spontaneous emptying of the uterus takes place in but about 13.2 per cent. of all miscarriages.

2. The likelihood of a miscarriage to complete itself increases with the duration of pregnancy.

3. When it becomes necessary to use artificial means to complete the miscarriage, the finger followed by the curette in later miscarriages, and of the curette alone in the earlier months of pregnancy, has given uniformly satisfactory results at the Boston City Hospital.

4. Experience has shown that where the cervix is extremely rigid it is better to introduce the curette and break up the fetus and placenta and remove them piecemeal than to attempt to dilate the cervix sufficiently to introduce the finger.

5. Packing the vagina and lower segment of the uterus is an unsatisfactory and often unsuccessful method of emptying the uterus. No success whatever was obtained in treating incomplete miscarriages in this way.

6. Packing is, however, of great value in two classes of cases: First, in exsanguinated patients, to stop the hemorrhage and give the woman a chance to recover somewhat from the loss of blood before emptying the uterus. Second, when the cervix is very rigid, a tight cervical pack for twenty-four hours will soften it so that dilatation may be attempted with safety.

7. The results of artificial methods are as good, but not better than where nature has succeeded in emptying the uterus.

8. Artificial methods are necessary in a majority of cases, however, simply because nature has failed.

9. In infected cases the essential thing is to get rid of the infectious material by emptying the uterus, the particular method employed making little difference.

10. The later in pregnancy miscarriage occurs the smaller the liability to become infected, but the greater the likelihood of developing grave septic complications if infection takes place.

11. The mortality is practically the same at all periods of pregnancy.

12. Induced abortions have a greater mortality than accidental. The mortality of patients admitted to the hospital after criminal abortions was 10 per cent.

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### HER TWO COMPLAINTS.

Edward, the colored butler of a lady in Washington, had recommended his mother for the position of cook, but when the applicant came the lady noticed that she was not very strong-looking.

"Do you suppose you will be able to do the work, Auntie? You don't look very healthy."

"Yes, ma'am, I is able; I ain't nuvver been no ways sickly in my life—ain't nuvver had nuthin' but smallpox an' Edward."—*September Lippincott's.*

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# Two Cases of Status Epilepticus.

By J. L. Tuechter, Cincinnati, Ohio.

CLINICAL reports are always interesting and instructive. Indeed, they are the most practical and useful form of medical literature. In the report here given of two remarkable cases of status epilepticus many highly suggestive clinical points are brought out, of which perhaps the most conspicuous is the relation of the gastro-intestinal tract and its condition to epilepsy. We do not gather from the author's comments that he means to credit this tract and its irritations with any fundamental etiology, but he certainly argues a good brief for careful attention to the stomach and bowel as an important part of the treatment of epilepsy.

The first case is that of a well developed young country boy from Greenville, Indiana. F. W. Age nineteen.

**Family History.**

Father and four brothers well. Mother developed epilepsy at twenty years of age, which continued until menopause. Had seven children, of whom five are living. One of them died at birth with convulsions, the other in early life, cause unknown. Mother would have very severe attacks during parturition and several times her life was despaired of.

**Past History.**

Boy had ordinary diseases of childhood. Had measles just before attacks started, also typhoid. No definite history of injury, except that at one time he fell out of an apple tree, but was only slightly bruised about the head and was not unconscious. Had first attack when about ten years old, since then has had attacks every two weeks to two months. Has no definite aura—usually has epileptic cry, bites tongue at times and occasionally froths at mouth. As a rule voids urine involuntarily. The attacks are always general, never localized.

**Present History.**

The boy came to Cincinnati to visit relatives on October 6th, 1910. Had nocturnal attack the following evening and two attacks the following Sunday. On Tuesday evening, October 12th, he went out with a friend to see the town, and did not get home until 2:30 next morning. All day Wednesday was feeling very drowsy and relatives say his actions were rather queer. On Wednesday evening he fell into a sort of stupor and that night began having attacks and on Thursday and Friday he went from one attack into another, absolutely never regaining consciousness between the attacks.

A physician was repeatedly called, and on arriving he always said that there was nothing to do, but that patient would sleep it off. Statements of relatives say that between Wednesday and Friday evenings the boy had between eighty and ninety attacks, in so far as he was averaging about two attacks an hour.

I was called to see the patient on Friday evening and found him in a state of coma from which he could not be roused. He was insensible to all irritations. Pupils were equal in size and dilated—reaction to light sluggish, nevertheless present. On ophthalmoscopic examination, found both papilae markedly injected. Tendon reflexes greatly diminished. No evidence of any paralysis. Rectal temp. 101, pulse 100, respiration 25.

Soon the patient had an attack, which was ushered in by a characteristic piercing cry. The convulsion was altogether bilateral, although it predominated slightly more on the right side. He did not bite his tongue, but frothed at the mouth and passed urine involuntarily. The attack lasted two minutes. Patient's bow-

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els had not moved for three days, so ordered an enema given, which was followed by an enormous result. He had one more convulsion before I left, which was similar to the one preceding and of same duration. Gave one-fourth grain morphine hyperdermically. During the night he had five more attacks.

Next morning (Saturday) had patient removed to Christ Hospital. During the day he had eight, and on Sunday, the next day, six attacks. On Monday four attacks, these being considerably milder in character, nevertheless patient was still comatose between attacks and unable to be roused. On Tuesday patient had two light attacks and late that afternoon showed the first signs of consciousness for a period of just six days. With the advent of consciousness, patient became maniacal and had to be placed in a straight jacket. This condition gradually subsided and patient became gentle, but was very much confused in all of his actions. There were no signs of paralysis, although speech was at first impaired and there was a temporary amnesia. He was out of bed on Saturday and left the Hospital two days after, not having an attack since the previous Tuesday. Repeated examination of the urine during his stay at the hospital were always negative.

The boy left for his home in Indiana October 28th, in very good spirits and apparently well. His speech, memory and mentality were good. A thorough examination before leaving failed to show any evidence of organic disturbance of the brain.

**Treatment at Christ Hospital.**

On admission was given a cathartic enema, followed by a simple enema, and this followed by an injection of chloral hydrate 3 grams, and potassium bromide 4 grams and then potassium bromide 2 grams per rectum every four hours. A nutritive enema consisting of peptonized milk 300 c. c., Dextrose 30 grams, yolks of two eggs and sodium bromide 1 gram, was given every six hours. Daily irrigation of bowels and hot bath. After regaining consciousness he was given 1 gram potassium bromide every six hours and on leaving hospital 0.8 gram four times daily. On leaving the city 0.6 gram four times daily, together with restrictions of alcohol, coffee and tea and of meat to a large extent. Also a minimum amount of salt in the food. A report from the patient on February 1st, 1911, says that up to that time he has had no attacks and on September 1st says that he has had one very mild attack, and that after a certain amount of overwork and gastro intestinal derangement.

CASE II. E. W.—Northside.—Well developed boy, aged thirteen.

**Family History Negative.**

Boy did not have ordinary diseases of childhood and no injury of any kind. Started to have convulsions at five years of age. Came running into the house frightened one day and later began to have attacks. These lasted for a few months and disappeared. Then began to have them off and on again at times, but would have them only during the night. Occasional biting of tongue and frothing at mouth with involuntary micturition. Four years ago had a severe series of spells with loss of speech, which lasted three months. During the day boy was always well and hearty and attended school regularly. He has no trace of memory of attacks, but there is an occasional feeling of depression if attacks are numerous.

I saw patient on March 26th, 1910. He had been having more spells than usual—had several attacks that day and that night, went from one attack into the other, having eighteen convulsions, ten the following day and the same number the next night. The day after, he had several attacks of milder character and regained consciousness after being comatose for forty-eight hours. Although both sides of the body were involved, the entire left side was drawn

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much more than the right. All reflexes absent during attack. Pupils equal and did not react to light. Fundus examination negative. Patient showed slight paresis of left side of face. There was partial aphasia and amnesia. Vision and hearing O. K.—no arm or leg paralysis.

For a few weeks patient had occasional daily attacks and a few nocturnal attacks. Then attacks disappeared altogether. I have now had the boy under observation for twenty months and a slight facial paresis still persists, together with some hesitancy in speech. At times he is free from attacks, but then again will have them for a while, but always nocturnal and mainly on the left side. He has absolutely no complaint to make during the day—never has headaches.

The treatment during the attacks was simply very large doses of chloral and bromide per rectum, with irrigation of the bowel. He is now taking 0.8 gram chloral hydrate and 1.5 gram potassium bromide at bedtime and his diet and habits are strictly regulated.

Case I is entirely negative as far as any objective examination can reveal the presence of organic changes in the cortex. Case II shows a slight paresis of the left side of the face, but the fact that he only has these attacks at night and feels perfectly well during the day and is at times free from attacks, seems to speak against any gross cortical changes. I have made repeated ophthalmoscopic examinations, but they have always been negative, if anything, the fundus has been paler than normal.

As to the probable etiology in these cases, I do not care to enter into its discussion any further than to emphasize the importance of two conditions as causative factors in keeping up the number of attacks, namely gastro-intestinal auto intoxication and fatigue. In Case I the boy has been able to notice that he would have more attacks after undergoing some extra physical exertion on the farm and also after going out with the boys and thereby disordering his digestion. I think I can easily attribute his condition of status epilepticus to this factor, as the boy was placed in new and more or less exciting surroundings, and was simply eating at any or all times of the day. As soon as the bowel condition was relieved the attacks started to diminish in number. In Case II after having the boy under observation for over a year, it is not difficult to notice that the times during which he has more attacks are coincident with some gastro-intestinal disturbance, be this ever so slight. I think it is essential that in treating these cases, we pay especial attention to the gastro-intestinal tract, and also, to see that these patients have sufficient physical and mental rest, as their nervous state is one of instability.

* * *

### TIT FOR TAT.

A Sentry, while on duty, was bitten by a valuable retriever, and drove his bayonet into the dog. Its owner sued him in the County Court for its value, and the evidence given showed that the soldier had not been badly bitten after all. "Why did you not knock the dog with the butt end of your rifle?" asked the judge. The court rocked with laughter when the sentry replied, "Why didn't he bite me with his tail?"

* * *

### HAD WORKED IN BOSTON.

"How will you have your eggs?" asked the girl behind the lunch counter.

"With as brief an interval of time," answered the absent-minded professor, "as possible intervening between the deposition of the oval spheroid in the nidificated receptacle by the female representative of the common or barnyard variety of domestic fowl and the subsequent appearance of the same in the marts of commerce where congregate the—"

"All right," interrupted the girl, "I think I understand. Scramble three!"

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# Six Years' Experience With Hepptine.

(*Physiologic Gastric Juice.*)

By J. Darwin Nagel, M. D., New York.
Consulting Physician to the French Hospital.

SEVERAL years ago Dr. Maurice Hepp, of Paris, started to investigate the chemical nature of the gastric juice, and after numerous researches discovered that the normal gastric juice of the living animal contained, beside pepsin and hydrochloric acid, some mineral elements which acted as excitants on the nerve endings of the pneumogastric nerve, and he was able to separate this mineral element and utilize it in certain gastric diseases. Dr. Nagel, who was associated with Dr. Hepp in this work, here gives a most interesting and valuable report of therapeutic experimentation with this new principle.

It is just six years since I began to experiment with the Pure Physiologic Gastric Juice of the living pig, as obtained by Dr. Maurice Hepp of Paris, and the enthusiasm, with which I entered upon my researches concerning this product, instead of diminishing has kept steadily on the increase, until today I can state with full conviction that there are very few gastric or gastro intestinal disorders, which will not yield to the use of the Physiologic Gastric Juice. This statement may appear somewhat too sanguine, but it coincides with the experience of a great many European and American observers, who at first sceptical as to the value of this product, have become its enthusiastic adherents.

As I have stated before in my papers, "Physiologic Gastric Juice," read before the Red Cross Society October, 1906, and "Physiologic Gastric Juice in Tuberculous Diseases," read before the International Medical Congress at Budapest, August, 1909, the basis of most gastric disturbances apart from those produced by ulcers, tumors or systemic causes, is the absence of the natural gastric juice and no matter how closely we endeavor to imitate the natural gastric juice by combinations of Hydrochloric acid with pepsine, we can never replace the true gastric juice and it is only by using the pure unmixed gastric juice obtained from the living animal and introducing the same into the human stomach, that we can succeed in combating the various conditions resulting from an absence of gastric juice.

It is to Dr. Hepp's studies and researches that we are indebted for our first practical results concerning the obtention and use of the pure physiologic gastric juice, for it was he who first advocated the use of the gastric juice of the living pig in ailments of the human stomach, as the composition of the gastric juice of the pig, an omnivorous animal, is analogous to the gastric juice secreted by the human stomach, and it was Dr. Hepp who first secured the gastric juice from the living pig by means of his now famous operation, which consists in separating the oesophagus at its gastric end and attaching the oesophagus to the duodenum, so that the food should pass directly into the intestines and not mix with the gastric juice of the stomach. He then creates a gastric fistula by attaching the severed end of the stomach to the abdominal muscles and through this fistula he withdraws daily the pure gastric juice (about one quart) unmixed with particles of food. I may add as a remarkable circumstance that the pigs once they recover from the operation continue to thrive and secrete gastric juice for three years, although no food ever enters their stomach.

Space will not permit me to go into

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detail concerning my experiences with the gastric juice during the past six years, but I shall group my report under the various headings as I have done in my previous papers.

Dyspepsia Due to Atony of the Stomach.—In all cases where I found my patients suffering from dyspepsia due to imperfect secretion or total absence of gastric juice, I have administered Hepptine as a routine practice and have made it a point to use no other drug with it, except the occasional administration of mild laxatives, as I wanted to obtain positive data as to the efficacy of Hepptine. Between September, 1905, and September, 1911, I have treated 406 cases of dyspepsia, most of them of the obstinate type, where all other medication had been tried unsuccessfully, and of these 368 were absolutely cured after a treatment varying from twelve to fourteen days. In twenty-four cases a relapse occurred after a period varying from three months to two years, but in no single case did the relapse persist when the use of Hepptine was again resorted to. Of course I am unable to say how permanent the cure was in all cases, although I endeavored to follow up my investigations as closely as possible, but as is the experience of all practitioners in large cities, many patients remove or leave town permanently, and that is the reason why I am unable to state whether the thirty-eight remaining patients out of the 406 treated were absolutely cured or not, although they all reported improvement soon after treatment was started. My method of procedure in dyspepsia has been to administer the Hepptine in tablespoonful doses diluted in a glass of water or fresh beer with each meal, so that the product could mix thoroughly with the contents of the stomach .

Dilatation of the Stomach.—During the last years I have treated forty-two cases of dilatation of the stomach, several of them of so pronounced a character that they were diagnosed by others as pyloric cancer, although exhaustive examination of these severe types permitted me to exclude cancer on account of the presence of some free H C L, absence of hematemesis and absence of palpable tumefaction or ganglionic enlargement. In these forty-two cases I obtained a complete cure in thirty-two patients, an amelioration of symptoms in seven cases and had failure in only three cases, due more to a complicating nephritis. All these patients were suffering from dilatation of the stomach as a result of chronic gastritis, with an absence of gastric juice and a subsequent enlargement of the flabby stomach from the long retention of food. In all these cases it is my custom to first wash out the stomach and to introduce through the tube milk to which I add a tablespoonful of Hepptine. After three days I discontinue the washings and place the patient on soft diet, administering the Hepptine in tablespoonful doses diluted in water three or four times daily.

Toxic Gastritis.—I have treated twenty-one cases of toxic gastritis, most of them caused by the continued use of alcohol, and in each case I obtained a complete restoration of the normal functions of the stomach. I need not say though that I made my patients suspend entirely the use of stimulants. As a rule I start these patients on a full dose of calomel, followed by salines. I then begin with milk and oatmeal water in small quantities every two hours, adding thereto two drams of Hepptine. After a few days I enlarge on the patient's diet until at the end of the third week most of them can retain and digest every variety of food. The Hepptine is continued until digestion is fully restored.

Chronic Diarrhoea.—In all cases where gastritis of long standing manifests itself in the form of chronic diarrhoea I resort to the use of Hepptine and it is remarkable to notice how quick-

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ly the persistent diarrhoea will yield to the use of the pure gastric juice. I have never used astringents or other drugs in such cases, but have relied solely on the Hepptine to stop the diarrhoea by restoring the normal functions of the stomach and in the sixty-four cases treated I have not once failed to obtain a cessation of the diarrhoea in from eleven to thirty days. The use of Hepptine in tablespoonful doses three or four times daily with saline enemas during the first few days has been the regular treatment administered to all patients.

Infantile Gastritis and Gastro-Enteritis.—During twenty-two years of practice I have always found it one of the most diffffficult problems to stop the summer diarrhoeas, the vomiting of infants due to improper feeding and the gastric troubles due to weaning. So many drugs were praised as specifics, so many conflicting opinions were advanced, so many methods of treatment were advocated that the general practitioner despaired of finding the proper remedy—and he rarely did find it. But since I have begun the use of Hepptine in this class of patients, the response to the gastric juice even in the severe types was almost immediate. During the past six summers I have had about 100 cases of summer complaint in children, while during the last six years I have had nearly eighty cases of vomiting from improper feeding or from change of diet at weaning and with the exception of eight cases that were in the last stage of marasmus, I obtained quick and lasting results with Hepptine. My method in these cases has been to administer the gastric juice in teaspoonful doses diluted with a teaspoonful of shaved ice every two or three hours, alternating it with egg-albumen during the first twenty-four hours and returning to the food adapted to the child's age as soon as vomiting has ceased, but continuing with the Hepptine until the child shows a decided improvement.

Tuberculosis.—The lack of appetite, the painful digestion and the vomiting which often complicate tuberculosis and prevent the use of nourishing food or the administration of drugs, can be often cured in cases of incipient and mild tuberculosis and greatly relieved in cases of advanced tuberculosis. I have treated altogether fifty cases of tuberculosis in the last six years, ten of these in the incipient class, twenty-six in the first stages, and fourteen in the advanced stages of the disease. Of the incipient cases I obtained a complete cure in nine cases, of the twenty-six patients in the primary stages I obtained a cure in eighteen cases, and of the fourteen in the advanced stage I obtained relief and cessation from the vomiting and distress after eating in every instance. I have used no other drug in conjunction with the Hepptine, but have relied solely on the restoration of the gastric functions following the use of the gastric juice, which enabled me to overfeed my patients and thus fit them to battle with the dread disease. Of course hygiene is essential in all cases. I generally feed my patients every three hours and administer Hepptine in tablespoonful doses with each feeding.

In Vomiting of Pregnancy and Post-operative Vomiting I make it a general rule to administer Hepptine with shaved ice and the most obstinate cases have never failed to yield to this treatment. In Chlorosis and in Slow Convalescence after severe exhausting diseases I use the Hepptine to improve digestion and thus advance the building up of the system, and I only regret that space will not permit me to go into greater detail concerning my experiences, but suffice it to say that Hepptine has enabled me to obtain results that six years ago would have seemed impossible, and I consider today the gastric juice of the living pig as my most valued ally in the whole range of drugs used for the treatment and cure of gastro intestinal ailments.

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# CURRENT MEDICAL LITERATURE.

## THE URINE IN EPILEPSY.

D. MOORE ALEXANDER, in *The Lancet*, states that the *urea-ammonia ratio* is of little value in itself as evidence of liver activity. It was used in this case, probably mistakenly, to gain some idea of the urea production. Urea is formed in greater part by the re-combination effected by the hepatic cells of ammonia and carbonic oxide, in the form in which it occurs in venous blood (ammonia carbamate). If the liver loses this power to any extent less urea will be manufactured, and ammonia in some form will escape into the blood. Too much ammonia or too little carbonic oxide, either of which conditions might occur through an error in metabolism, would lead to the same result. The alkalinity of the blood would be affected in consequence, though its restoration to normal would take place rapidly by the automatic re-adjustment of the phosphates. But such an alteration in reaction, though slight and transient, might be capable of affecting sensitive nerve-cells. The gravity of such an altered condition is heightened if the powerful convulsant effects that ammonia can produce when injected experimentally into the circulation be remembered.

So far only six cases have been examined, but these have been investigated for some months. The 24 hours urine was collected in a covered receptacle containing some thymol to prevent decomposition. The urea was estimated in a Gordon-Little's ureometer. The ammonia determination was performed by three methods, and finally that of Schlössing was adopted as it was the simplest, and if attention were paid to uniformity of the surface-area of urine exposed the error as estimated by the control methods was very small.

It was found that the urea-ammonia ratio varied very much; at times it reached 100 or even more; at its lowest it became as low as ten, in one case 9.3. These numbers were obtained as per following example:

$$\frac{\text{Amount of urea passed in 24 hours grams}}{\text{Amount } NH_3 \text{ passed in 24 hours grams}} = \frac{41.77}{1.081} = 38$$

The fits appear to have some correspondence with a low ratio, although occasionally there is a fit when a high ratio occurs. For example, the ratio was obtained daily in Case 1; it runs:

Case 1.—9.33 (1 fit), 12, 36, 82, 28 (1 fit), 38, 55 (1 fit).
Case 2.—97 (1 fit), 10 (1 fit), 18, 154, 37 (1 fit), 36, 33, 35.
Case 3.—134, 45.2, 24, 10 (2 fits), 18 (2 fits), 36, 45 (1 fit), 29 (1 fit).
Case 4.—17 (1 fit), 48, 30, 28 (1 fit), 83.
Case 5.—40, 40, 40, 40, 28 (1 fit).

These are weeks taken at random from the charts of daily investigations and speak for themselves. A larger series is required before anything definite may be said.

An attempt was made to obtain the first urine passed after a fit. This was difficult, for the patient so frequently micturated unconsciously. But eight specimens were eventually obtained from different epileptics and passed not more than four hours after the attack. The urea-ammonia ratio of these eight specimens runs: 7 6, 12, 5, 5 7, 3 0, 12, 38, and 15; low in every case.

*Evidences of intestinal putrefaction.*—This was investigated by means of Ehrlich's test. A solution of para-amido-benz-aldehyde in hydrochloric acid is added to urine, using 10 c. c. of urine and 1 c. c. of the test solution for uniformity. A deep red cherry colour indicates putrefaction, and its degree is said to be measured by the depth of colour produced. Herter has found a correspondence between the amount of skatol in the fæces and the intensity of this reaction. The test was performed on

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each urine in the following way. Ten cubic centimetres of urine were measured into each of three test tubes, and 1 c. c. of the Ehrlich solution added. One tube was placed aside, the second was gently warmed, and the third rapidly raised to boiling-point.

The results were tabulated in four classes, indicating the production of colour in the cold, on gentle heat, on boiling, or only after boiling and standing some time. Twelve control urines of healthy individuals were first investigated. Of these, two only gave a reaction in the cold at once, seven a reaction on gentle heat being applied, and three a slight reaction on or after boiling. Twenty-three epileptic urines were examined. No urine gave an immediate reaction in the cold. Eight gave a reaction in the cold after standing from varying periods from half an hour to two hours; five gave a colour only after gentle heat. Four required to be boiled to obtain the test; the remaining six required to be boiled and allowed to stand for some hours before a definite cherry tinge appeared.

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### THE EXTERNAL MALLEOLUS SIGN.

Chaddock reported this new diagnostic sign to the *St. Louis Neurological Society,* and elaborates it in the *Interstate Medical Journal* as follows:

"To determine its absence or presence the following procedures have been employed. With the patient in bed on the back, the lower limbs relaxed and extended, and wholly exposed, the soles and the ankles are readily accessible for the experiment. If possible, especially in doubtful cases, the limb to be tested should not be compressed or touched in any way except at the point chosen for the application of the stimulus. Recalling the possible reactions from indifferent skin areas, especially in profound cord lesions, will make the reason for this precaution clear. Of course, in restless patients it may be necessary to fix the limb, preferably by forcing the thigh against the mattress. With the patient lying on the side, the limbs may be bent at the knee; and by changing sides, each external malleolus is made accessible. Relaxation of the muscles of the legs and feet is very essential for the test in doubtful cases, as muscular relaxation is in tests for reflexes in general. When the patient can be examined sitting in a chair, the most convenient and satisfactory position and condition of the limb are obtained by having the limb to be examined resting on the examiner's knee (the latter sitting at a convenient distance) so that the limb is supported at the lower portion of the calf-muscles. The examiner can change from one side of the patient to the other, thus seeing perfectly, from the external aspect, the ankle, foot and toes. This position permits the most accurate observation of the toe movements and perfect control of the point irritated and of the intensity of the stimulus applied.

"The irritation of the skin is best done with a rather dull steel point (a nail-file not sharp enough to wound the skin has served my purpose); in some cases the test can be made with a stout wooden toothpick, but absence of reaction to such irritation would not be conclusive. The area to be tested is the groove which outlines the external malleolus. In this groove, the point of the instrument used should be drawn from behind forward until the depression between the malleolus and cuboid is reached. This depression seems to be the most excitable point of the area. The degree of irritation applied should always be varied from slight stroking to rather severe scratching with considerable pressure, though it is never necessary to abrade the skin or cause actual pain. Normally, this stimulus causes no movement whatever of the toes; it does, however, in some cases, cause reflex contraction of the thigh-muscles exactly like that observed normally when the sole of the

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foot is similarly irritated. The abnormal reaction consists of extension or fanning of one or more, or of all the toes; the author is also convinced that a movement of flexion observed in a few cases, which were otherwise shown to have organic disease of the central nervous system, had the same pathological significance as extension had in other cases. In one case in particular, with Babinski's sign on one side, there was flexion of all toes from the external malleolus of the same side; and before examination of the opposite side, prediction was made that the reversal of movement usually observed would occur on that side. It was found with normal plantar flexion to irritation of the sole. It is notable that this reversal of movement has been observed associated with the reversal of Gordon's sign in several instances. A striking peculiarity of the external malleolar sign is the fact that with a unilateral Babinski, it is the rule to find the external malleolar sign on both sides.



### THE MODERN MISER.

Geo. K. Chesterton, in the *Daily News* (London), thus discourses on the miser of the twentieth century:

"The modern miser has changed much from the miser of legend and anecdote; but only because he has grown yet more insane. The old miser had some touch of the human artist about him, insofar that he collected gold—a substance that can really be admired for itself, like ivory or old oak. An old man who picked up yellow pieces had something of the simple ardor, something of the mystical materialism, of a child who picks out yellow flowers. Gold is but one kind of colored clay, but colored clay can be very beautiful. The modern idolator of riches is content with far less genuine things. The glitter of guineas is like the glitter of buttercups, the chink of pelf is like the chime of bells, compared with the dreary papers and dead calculations which make the hobby of the modern miser.

"The modern millionaire loves nothing so lovable as a coin. He is content sometimes with the dead crackle of notes; but far more often with the mere repetition of noughts in a ledger, all as like each other as eggs to eggs. And as for comfort, the old miser could be comfortable, as many tramps and savages are, when he was once used to being unclear. A man could find some comfort in an unswept attic or an unwashed shirt. But the Yankee millionaire can find no comfort with five telephones at his bed-head and the financial world changing every five minutes. The round coins in the miser's stocking were safe in some sense. The round noughts in the millionaire's ledger are safe in no sense; the same fluctuation which excites him with their increase depresses him with their diminution. As the miser gathers gold he cannot eat, the millionaire counts figures he cannot buy or sell. The miser at least collects coins; his hobby is numismatics; the man who collects noughts collects nothings.

"It may be admitted that the man amassing millions is a bit of an idiot; but it may be asked in what sense does he rule the modern world. The answer to this is very important and rather curious. The evil enigma for us here is not the rich, but the Very Rich. The distinction is important; because this special problem is separate from the old general quarrel about rich and poor that runs through the Bible and all strong books, old and new. The special problem today is that certain powers and privileges have grown so world-wide and unwieldy that they are out of the power of the moderately rich as well as of the moderately poor. They are out of the power of everybody except a few millionaires—that is, misers. In the old normal friction of normal wealth and poverty, I am myself on the Radical side. I think that a Berkshire squire has too

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much power over his tenants; that a Brompton builder has too much power over his workmen; that a West London doctor has too much power over the poor patients in the West London Hospital.

"But a Berkshire squire has no power over cosmopolitan finance, for instance. A Brompton builder has not money enough to run a Newspaper Trust. A West End doctor could not make a corner in quinine and freeze everybody out. The merely rich are not rich enough to rule the modern market. The things that change modern history, the big national and international loans, the big educational and philanthropic foundations, the purchase of numberless newspapers, the big prices paid for peerages, the big expenses often incurred in elections—these are getting too big for everybody except the misers; the men with the largest of earthly fortunes and the smallest of earthly aims.

"There are two other odd and rather important things to be said about them. The first is this: that with this aristocracy we do not have the chance of a lucky variety in types which belongs to larger and looser aristocracies. The moderately rich include all kinds of people—even good people. Even priests are sometimes Saints; and even soldiers are sometimes heroes. Some doctors have really grown wealthy by curing their patients and not by flattering them; some brewers have been known to sell beer. But among the Very Rich you will never find a really generous man, even by accident. They may give their money away, but they will never give themselves away; they are egoistic, secretive, dry as old bones. To be smart enough to get all that money, you must be dull enough to want it.

"Lastly, the most serious point about them is this; that the new miser is flattered for his meanness and the old one never was. It was never called self-denial in the old miser that he lived on bones. It is called self-denial in the new millionaire if he lives on beans. A man like Dancer was never praised as a Christian saint for going in rags. A man like Rockefeller is praised as a sort of pagan stoic for his early rising or his unassuming dress. His 'simple' meals, his 'simple' clothes, his 'simple' funeral, are all extolled as if they were creditable to him. They are disgraceful to him: exactly as disgraceful as the tatters and vermin of the old miser were disgraceful to him. To be in rags for charity would be the condition of a saint; to be in rags for money was that of a filthy old fool. Precisely in the same way, to be 'simple' for charity is the state of a saint; to be 'simple' for money is that of a filthy old fool. Of the two I have more respect for the old miser, gnawing bones in an attic; if he was not nearer to God, he was at least a little nearer to men. His simple life was a little more like the life of the real poor."



## TREATMENT OF SPINAL INJURIES.

A. R. Shands, in the *International Journal of Surgery,* says that in all cases a most rigid support should be used, such as in the treatment of Pott's disease. In these patients the very best means of immobilizing the spine is a snugly fitting plaster-of-Paris jacket. If there is any deformity it should be reduced as much as possible before applying the jacket. The repair in such cases is slow, and the support should be continued just so long as there is any indication for it, whether it be one month or twelve months. If the seat of the injury is above the sixth and below the third dorsal vertebra it will be necessary to extend the jacket over the shoulder to produce anything like a sufficient support. If the fracture is above the third dorsal vertebra, the plaster-of-Paris should be extended over the head. After the acute stage has subsided a removable jacket may be used, and for this purpose the author makes one after the

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style of that devised by Calot with the opening down the back instead of down the front.

The jacket should be applied with the spine extended as much as possible. This is best obtained with the ordinary upright extension apparatus, but in many cases the pain and muscle spasm are so great that the patient cannot stand this ordeal. Under these circumstances the recumbent method should be used either in a hammock, or on the steel frame devised by Goldthwait. My preference is the hammock; this method, with two assistants keeping up countertraction, is quite efficient in production traction, and causes little or no discomfort to the patient while the plaster-of-Paris is being applied.

The plaster-of-Paris jacket has many advantages over the recumbent method of putting an injured spine at rest. In the first place it is impossible for the spine to be at perfect rest without a rigid support, for every time the patient moves in bed there must be some motion between the vertebræ, and this will cause muscle spasm and pain; this is not the case with a snugly fitting jacket. The patient with a jacket can roll about in bed just as much as he pleases, and can be put in a rolling chair and carried out of doors, and if he is unsteady on his legs, he will soon be able to get around on crutches with little or no jar to the painful spine. If the injury is below the mid-dorsal region, the jacket should reach well over the brim of the pelvis. The author's rule is to extend it down to the tip of the great trochanter and well over the pubic bone. This will give well-nigh perfect antero-posterior and lateral support to the spine. This is absolutely necessary when the sacroiliac joint is injured, which is generally the case whenever the injury is in the lumbar region.

The subject of injury to the sacroiliac joint of late has received a great deal of attention from numerous writers, and cannot be spoken of in anything like an adequate way in this paper. In passing, however, the author thinks it is a subject that has been undoubtedly "overworked" of late. There is undoubtedly such an injury, but he thinks many a case of ordinary backache and lumbago has been treated as a relaxed sacroiliac joint. If every injured spine resulting in a painful and relaxed sacroiliac joint were recognized at the time of injury and supported with a properly applied plaster-of-Paris jacket extended well over the hips, there would be but very few cases to go beyond the acute stage.

In applying a plaster-of-Paris jacket there are many points in the technic to be considered. There are many patients that cannot be suspended in the usual way without causing great pain, nor is such procedure free from danger of producing asphyxia in cases of injury to the cervical spine, with great pain and muscle spasm; this difficulty can be easily overcome by using a cheese-cloth hammock instead of the suspension apparatus. All of the bony prominences should be well protected from undue pressure by being well padded with some soft material. Use for this purpose a cotton felting such as every good housekeeper uses under the dining table cloth.

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## TREATMENT OF TACHYCARDIA.

H. V. Halbert, in the *Unique*, declares that the treatment of this condition, under our present knowledge, will bring absolute results. Heretofore we have placed too much stress upon the feature of rest, and too many patients have been sent to the rest cure without any remedial attention. The disease, however, will yield more satisfactorily to systematic and studied treatment, and we should attend to it primarily and regularly with our remedies. We observe a tachycardia so frequently in association with Graves' disease that naturally our remedies which apply in that disease are among the first to be used. This

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is a correct consideration but it is equally related to neurasthenia, and therefore our treatment should look to this cause at the same time. Nerve cells are exhausted, and medicines which tend to restore the cell protoplasm will at once lessen the excitability of cardiac action, as the restored cells are able to regulate the innervations. This applies to the sympathetic cells, which are first concerned in the motor activity of the heart; the application is equally important as it pertains to the vagus. The control of this nerve, the action of which is to inhibit undue cardiac action, is extremely important when neurasthenia is a factor in the tachycardia.

Thus it is apparent that we have much more to think of in the treatment than the simple regulation of the heart excitability. In fact, we will never get perfect results if we ignore these two exciting causes.

When the tachycardia is due entirely to sympathetic loss of control we may get prompt results from such remedies as lycopus and fucus, but when there is a greater disturbance of the general nervous system we shall find a demand for a larger list of remedies which may be indicated. This is one of the more exacting features of our work, and will require much study on the part of the prescriber. In my experience there is no remedy which meets the symptoms more frequently than agaricin., and if we study this remedy carefully we shall find that it often applies to the disease. The author gives it in one-tenth grain doses four to six times daily, and for a long time. There are many remedies of associate value which cannot be overlooked, and among these are ignatia, hyoscyamus, gelsemium, the valerinate of ammonia and picric acid. Caffein valerinate, asafetida, cimicifuga and coffea are too frequently overlooked. The paroxysms of the hysterical state may be greatly relieved by the use of moschus, nux moschata and pulsatilla.

When we treat tachycardia according to the peculiar symptoms which it presents we shall manage it in the proper way. As it is in itself a symptom, we must correct it by treating it as such. Usually there are some prominent indications which make this clear. If we try to suppress it by giving remedies which diminish the heart's activity we shall make a great mistake, and for that reason a cardiac tonic is a rare requirement; the moment we discontinue such a remedy the heart will lose, and the object we seek will not be attained. When there is an absolute underlying cardiac lesion a cardiac tonic may be a safe adjuvant.

Tachycardia requires a long course of treatment, and the indicated remedy should not be discontinued until the heart resumes its normal activity. We must manage our patient as well as administer the remedy, and we must not lose sight of the underlying cause. Habits must be corrected, occupation must be controlled, and environment must sometimes be changed. The nervous system must be protected at all times, and if we fail to cure, it will be because we do not properly manage our patient.

## PROLONGED PREGNANCY.

A. H. Wright, in the *Interstate Medical Journal,* repeats the recommendations published in the American Journal of Obstretrics two years ago, to induce all labor at term as a matter of routine. He says that if this is done in an aseptic way it is practically devoid of danger, that the gravest danger is really the growth of the child *in utero,* and that in any case the induction of labor involves much less danger than a labor when pregnancy has been prolonged to ten months. Since the Schauta method of vaginal tamponade is not effectual in a large proportion of cases, the author advises in the majority of cases that a tube or bougie be introduced into the uterine cavity as the first step. The parts

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should be prepared as for vaginal hysterectomy, and with the patient in the lithotomy position a weight speculum is introduced and the cervix fixed with a tenaculum forceps. A sterilized gum elastic bougie (No. 12E) is then introduced gently within the uterus up to the fundus if possible, care being taken not to rupture the membrane. The patient is now turned from the back to Sims' position and after the introduction of a Sims speculum the vagina is tightly packed over or around the small portion of the bougie projecting into the vagina. The lower third of the vagina should not be packed. If the introduction of the bougie or tampon produces pain, as it frequently does, an anesthetic,—preferably ether,—is administered. Wright believes that protracted pregnancy occurs in fifteen per cent of all cases and that protraction to the extent of four weeks occurs in about six per cent of the cases where there is no interference.

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## POST PARTURIENT TREATMENT.

Greer Baughman, in the *Virginia Medical Semi-Monthly,* points out that in considering the muscles we have two problems: one is the removal of the hypertrophied non-striated muscle of the uterus; the other is the restoring of tone to the stretched and splayed striated muscles of the vagina, perineum and the abdomen. The non-striated muscle of the uterus is hypertrophied but not increased in number. According to Sanger the involution of the uterus on the part of the muscle is the absorption of the protoplasm of the muscle. He found that at full term the length of the average muscles fibre was 208.7 microns, while five weeks after labor they were only 24.4 microns. It takes six weeks very often for the uterus even in an uncomplicated case to come back to normal. This fact has induced me to instruct my primiparae not to return to their usual avocations until at least six weeks has past.

Both the vagina and perineum have been stretched to their utmost during labor and often they are ruptured. Sometimes the ruptures are clean cut but more often they are bruised as well as lacerated. Even when they are promptly and properly repaired they do not always make a perfect pelvic floor. This may be due to the fact that the parts are too much bruised to unite, or because the weak union is stretched by the pressure of a subinvoluted uterus when the patient gets up too soon, or because the wound becomes infected. When there is no tear, the muscle fibres are stretched to their utmost capacity and the individual fibres are widely separated. The rugae do not appear in the vagina until the third week after delivery. These are facts that are well known and are usually taken into account, but the necessity of seeing after the abdominal muscles and the importance they play in the whole future life of the parturient woman is not so widely known by the average physician.

For four months the abdominal muscles are stretched by the growing uterus; then at the time of delivery particularly, if the case be a primipara with a long labor, the muscles are put to the most violent exercise. In many cases these muscles have already been atrophied by improperly adjusted corsets and lack of exercise. In addition to this, many of the women during the pregnant state have gotten less exercise than usual at first because of nausea, and later, when they have begun to show, because of a false modesty.

It is not uncommon for virgins to have enteroptosis. These cases, because of the increased intra-abdominal pressure due to the growing uterus, often improve when they become pregnant. The author is always solicitous about the future of a case that has been chronically constipated and that shows other signs of enteroptosis, beginning to have regular movements, as the uterus in

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growing increases the intra-abdominal pressure, because after delivery the abdominal muscles, weakened by pressure and strain, will add to the enteroptosis.

The external and internal oblique, transversalis, recti, and pyramidalis, by their contraction with the chest and abdomen, help to expel the fœtus. These muscles with the fascia and their aponeuroses form the covering to the anterior abdominal walls. For four months these tissues have been put upon the stretch, and after the severe contraction incident to the expulsion of the fœtus, they are not only stretched and tired but their fibres are spread apart. After repeated pregnancies, particularly if they are in quick succession, the muscles often suffer from pressure atrophy. The splaying of the muscles and their paralysis is noticeable after delivery in the ease that the uterus and other abdominal organs can be palpated through the abdominal wall. In some well-developed women the muscles quickly regain their tone and by the time the patient is ready to leave bed are rested and back in their proper relations, but this is the exception. The flabby abdominal muscles are often seen weeks and months after delivery.

It seems to the author that our responsibility in a case of labor does not cease until the mother has returned to a perfectly normal condition. She has not reached normal condition until the perineum and vagina are normal, until the uterus is involuted and the abdominal muscles are performing their function in a normal manner.

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## TREATMENT OF COLDS.

W. N. Robertson, in a timely article on the *Australian Medical Gazette,* divides treatment into preventive and curative. Preventive treatment, he says, would consist in the avoidance of all those predisposing and exciting causes which we have enumerated, of which we have control. Abundance of fresh air and exercise, avoidance of exposure to cold and wet, especially wet feet, moderation in eating, and the wearing of clothing suited to the temperature should be insisted on. I believe that sleeping in the open air is a great preventive of colds. Any nasal abnormality should be rectified. I am constantly seeing patients who were regular sufferers from cold who completely lose that tendency on the establishment of normal conditions in the nose.

What are we to do when a cold threatens? Unfortunately one does not see the cases in that stage, but I am satisfied that many attacks might be aborted if taken in time. Put the patient to bed, give a brisk purgative, calomel at night followed by a saline in the morning. Ten grains of Dover's powder with hot lemonade, and a hot air or poor man's bath act most beneficially. The latter is an excellent substitute for the more elaborate hot air bath. Half a dozen soda water bottles are filled with hot water, enclosed in socks and placed alongside the patient, who speedily responds with a generous perspiration. Opium in one of its forms, preferably with belladonna, is one of the best remedies to abort an attack. Ten minims of tincture of opium with spt. æther nit. and liq. ammon. acet. every few hours gives excellent results. I have tried ol. cinnamomi in 5 minim doses with a drachm of olive oil in an emulsion, and am satisfied that it acts effectively. Unless well diluted it causes heartburn.

Camphor, belladonna and quinine in combination have a great vogue in the "States." The dose given being gr. ½, gr. ⅛ and gr. ½ to gr. 1 in that order. It must be pushed until dryness of the throat is felt.

Locally inhalations of benzoin vapour or benzoin and menthol vapour give considerable relief. Possibly nothing gives more relief than a spray of cocain, but it is well to be very careful with the drug, as if it is left in the hands of pa-

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tients the habit may be formed. If the condition is not relieved within 24 hours the nose may be sprayed frequently with ol. cassiæ, ol. santali and M.v. in 1 oz. liquid vaseline, or a combination of camphor menthol with ol. eucalypti and ol. cinnamomi is effective. Various snuffs are recommended, but I have received less benefit from them than from sniffing up powdered boracic acid. It stings for a moment, but speedily induces a copious watery secretion, with reduction of the tumidity and stuffiness.

When the muco-purulent stage is reached considerable comfort will be obtained by washing out the nose with an alkaline lotion, composed of baking soda, borax and sugar, or simple saline, after which the free use of the atomiser has a soothing effect. The excoriation of the nares may be relieved by the use of lanoline or hazeline cream. The addition of hazeline to the alkaline lotion is beneficial for its astringent effect.

At this stage tonics in the shape of quinine and iron are indicated with a generous diet, and if convenient a change of surroundings.

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## TREATMENT OF SEXUAL NEURASTHENIA.

Jos. E. Morrow, in the *Medical Era,* states that while no drugs have a specific influence, still, if they be judiciously administered, much assistance can be had from them. In the irritable stage bromide of potassium, 15 grains after each meal and 30 grains at bedtime, pushed until moderate bromism is induced, after this, given in reduced dose for two or three weeks, effectively relieves the sexual hyperesthesia. If bromides are not well borne salix nigra, dram one of the specific tincture after each meal, will be serviceable. Camphor, lupulin, cannabis indica and hyoscyamus are recommended. In irritable conditions of the ejaculatory apparatus belladonna, or its active principle, atropin, are of great service. Ergot, by its influence on unstriped muscular fibres, assists greatly in restoring vascular tone. In the atonic stage, after all irritability has been relieved, phosphorus, strychnia, coca, and the elixir saw-palmetto and santal compound, exert a restorative influence.

Local Treatment—Where the urethroscopic examination reveals an enlarged verumontanum, or general redness and congestion of the prostatic mucosa, direct applications of strong solutions of silver nitrate do much good by allaying hyperæsthesia. These applications are especially serviceable when the mouths of the ejaculatory ducts are relaxed. Where the vesicles are not diseased, the passing of a full-sized conical steel sound two or three times a week, allowing it to remain in position five minutes, is an effective means of relieving congestion and restoring the muscular tone of the prostate. Morgan's frigid sound, applied for five minutes every third day, is an excellent sedative and tonic. When the prostate is small and flabby and the vesicles are tender to touch, massage, at intervals of four days, will, if persistently adhered to, relieve the hyperæsthesia and hyperæmia and give tone to the sexual apparatus. Astringent applications, with Ultzman or Keyes syringe, such as thalline sulphate, silvernitrate, and cupric sulphate, is an excellent means of correcting a relaxed condition of the mouths of the ejaculatory ducts. The old method of cauterizing as suggested by Lallemand, is mentioned only to be condemned.

When all irritability has been relieved and sexual power has not been restored, the cautious use of the Faradic current may be tried. This is applied to the deep urethra by means of an electrode shaped like the ordinary sound, with all but an inch and a quarter of the curved portion insulated. With the instrument in position and attached to the negative pole, the positive pole is applied over the upper part of the sacrum, or inner aspect of the thigh.

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# THE DOCTOR HIMSELF.

## "LITTLE THINGS THAT PAY."

By W. R. Fowler, M. D., Pottsville, Texas.
Read before the Texas Eclectic State Society.

IN THIS day and age of the world, perhaps more than in any other which has preceded it, men are looking for things that pay. Things that bring in large returns upon the investment are the ones that interest us most. Convince a man that you have a paying proposition and you at once enlist his interest.

Also we are very prone to look for big investments, large fees and grave cases, and to only such are we apt to give our best attention. Whether this is as it should be or not I am not going to discuss at this time, but will merely call your attention to some few "little things that pay." Not that you do not already know them, but my purpose is simply "to stir up your pure minds by way of remembrance."

An hour's reading each day is a small thing, too small to engage the attention of many a doctor, yet, I say to you that for the investment made nothing else I know of will bring as large returns. It keeps up your interest as nothing else will do; it enlarges one's store of useful knowledge; it broadens our view of life's great work, and besides all this it supplies your own brain cell with proper exercise and food and retards your own decay.

A small bill is a very small thing, especially to a doctor when he has so many of them. Still, it pays to collect them—collect them while they are small. The very smallness of the bill is a help in its collection. It pays not only in the amount of dollars and cents involved, but your patrons will learn that you are businesslike and careful in even the little things, and he that is careful and faithful in the little things is fitting himself for the greater things.

The investment of a few dollars is another very small thing in itself, but when the happiness and comfort of yourself and family in your declining years depend upon it, it does not appear so small, and we can easily see that if properly invested it pays. Doctors by the thousand are losing their hard-earned surplus by investing in propositions of which they know nothing except that they promise large returns.

The doctor is neither by education nor training fitted for such scheming. Keep your earnings near home, invested in good notes and landed securities with fair interest. Here as everywhere else, the safest is always the best. By judicious investments in your own community, as I have suggested, your safe business principles will inspire your patrons with greater confidence in you, and you will not only provide for your declining years, but you will also be a real benefactor.

Next, attend your state society meetings. This is not a big thing, but one that is sadly neglected. Even so little a thing as a straw tells which way the wind is blowing. So, besides the new ideas we get at these meetings by the interchange of thought, the renewal of old friendships and the forming of new ones that go so far towards making life worth living, we show to our fellow soldiers in the great war against disease, and our patrons at home, that we are alive to the best interests of the cause we represent and that wherever duty calls we will there be found.

Another thing that is small within itself, one that is overlooked and neglected most of all, is to write an occasional letter to your president, or at least answer the letters he writes you. There is no more sacred professional duty we owe each other than this. We

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are more or less all guilty. Let's renew our pledge of brotherly love and promise each other a more faithful performance of these little duties. It will pay in the consciousness of duty performed, increase our interest in our profession and encourage our president in his unselfish labor for the good of all.

There are many other LITTLE things that pay. In fact, I am constrained to believe that the little things, those classed as such, pay the largest dividends. Two more and then I am done.

Cultivate the acquaintance and friendship of every child you meet. This is seemingly one of the least things of all. To some, however, it will be found very difficult to put into practice. Yet, the more difficult it is for you the more you need both their acquaintance and the training the effort will give. There is a declaration in Holy Writ that "A little child shall lead them." This is true in more ways than one. The majority of our patients are children and their influence for the doctor they love most will bring us many new patrons as well as help us retain the old ones. Not only this, but their influence over our own lives will help to keep us younger, enlarge our sympathies and keep us from losing faith in mankind.

Our next largest class of patients is among the wives and mothers of our communities. We may have the profoundest knowledge, the greatest possible skill, and still fail as a physician. Our knowledge, our skill, our tact and fair speeches all come to naught before her with whom we have so much to do. There are two things, little things in the consideration of many, that count for more with the wife and mother than all else combined. These are honesty and sympathy. Be honest with them always; they expect it; they are entitled to it, and they will never forgive you if you deceive them. Then, be sympathetic. I do not mean that you shall always be running over with a kind of sentimentalism that sometimes passes for the genuine article, but with that honest appreciation of their difficulties and needs and a real fervent desire to help. We should never be impatient with them when they come to us for aid. Never make light of any mortal fear they may have. The most of these are real to them and we can neither retain them nor help them unless we seek their confidence upon the high plane of honesty and real sympathy.

These things that I have mentioned are little by themselves, but I have seen men of the profoundest learning, without these little things, failures. On the other hand I never have seen a man with even ordinary ability and possessing and cultivating these little things but what was prosperous in his business, respected by his neighbors, beloved by his friends and a real benefactor to the world.

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## A STORK'S NEST.

The following details concerning the structure and contents of a stork's nest investigated on the summit of the Cathedral of Colmar, in Upper Alsace, may be of interest: The city architect has just delivered a public lecture there on "Storks and Their Ways." He described a stork's nest which was about thirty years old; it measured six feet across and was five feet in height; it weighed over three-quarters of a ton, and it was such a solid mass that it had to be broken up by using a pick-ax. The nest was made of twigs of wood and clay, and the materials filled twenty-four sacks. The walls of the nest were found to contain seventeen ladies' black stockings, five fur caps, the sleeve of a white blouse, three old shoes, a large piece of leather and four buttons that had belonged to a railway porter's uniform.

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## THE CURSE OF EDUCATION AS IT IS LAID ON AMERICAN YOUTH.

By way of preface to an indictment of

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the entire school and college training of the land, says *Current Literature,* Dr. Boris Sidis, one of the most renowned of living psychologists, observes that the education of a child should begin between the second and third years. It is then that the child begins to form his interests. It is at that period that we must seize the opportunity to guide the formative energies of childhood in right channels. To delay is a mistake, a wrong to the child. It is the idlest nonsense, writes Doctor Sidis, to be afraid of forcing the child's mind. We cannot strain the brain prematurely. If we fail to direct the energies in the right direction, the child will waste them in the wrong direction. For the same amount of mental energy used in those silly games which we think specially adapted to the childish mind can be directed with lasting benefit to the development of interest in intellectual activity and love of knowledge. The child will learn to play at "the game of knowledge acquisition" with the same ease now revealed in its nursery games and physical exercises.

"What is more of a truism than the axioms of geometry and mechanics—that the whole is greater than the part, that things which are equal to the same thing are equal to one another, or that a body remains in the same state unless an external force changes it? And yet the whole of Mathematics and Mechanics is built on those simple axioms.

"The elements of science are just such obvious platitudes. What is needed is to use them as efficient tools and by their means draw the consequent effects. The same holds true in the science of education. The axiom or the law of early training is not new, it is well known, but it is unfortunately too often neglected and forgotten, and its significance is almost completely lost.

"It is certainly surprising how this law of early training is so disregarded, so totally ignored in the education of the child. Not only do we neglect to lay the necessary solid basis in the early life of the child, a solid basis ready for the future structure, we do not even take care to clear the ground. In fact, we even make the child's soul a dunghill, full of vermin, of superstitions, fears and prejudices, a hideous heap saturated with the spirit of credulity.

"We regard the child's mind as a *tabula rasa,* a vacant lot, and empty on it all our rubbish and refuse. We labor under the delusion that stories and fairy tales, myths and deceptions about life and man are good for the child's mind. Is it a wonder that on such a foundation men can only put up shacks and shanties? We forget the simple fact that what is harmful for the adult is still more harmful to the child. Surely what is poisonous to the grown-up mind cannot be useful food to the young. If credulity in old wives' tales, lack of individuality, sheepish submissiveness, barrack-discipline, unquestioned and uncritical belief in authority, meaningless imitation of jingles and gibberish, memorization of Mother Goose wisdom, repetition of incomprehensible prayers and articles of creed, unintelligent aping of good manners, silly games, prejudices and superstitions and fears of the supernormal and supernatural are censured in adults, why should we approve of their cultivation in the young?"

We press our children into the triumphant march of our industrial Juggernaut, says Dr. Sidis. Over 1,700,000 children under 15 years of age toil in fields, factories, mines and workshops. The slums and the factories cripple the energies of our young generation. The slaughter of the innocents and the sacrifice of our children to the insatiable Moloch of industry exclude us from the rank of civilized society and place us on the level of barbaric nations.

Our educators are narrow-minded pedants. They are occupied with the dry bones of textbooks, the sawdust of pedagogics and the would-be scientific experi-

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ments of educational psychology; they are ignorant of the real vital problems of human interests, a knowledge of which goes to make the truly educated man.

"It is certainly unfortunate that the favored type of superintendent of our public education should be such a hopeless philistine, possessed of all the conceit of the mediocre business man. Routine is his ideal. Originality and genius are spurned and suppressed. Our school-superintendent with his well-organized training shop is proud of the fact that there is no place for genius in our schools.

"Unfortunate and degraded is the nation that has handed over its childhood and youth to guidance and control by hide-bound mediocrity. Our school-managers are respected by the laity as great educators and are looked up to by the teachers as able business men. Their merit is routine, discipline and the hiring of cheap teaching-employees. . . . They stifle talent, they stupefy the intellect, they paralyze the will, they suppress genius, they benumb the faculties of our children. The educator, with his pseudo-gogics, can only bring up a set of philistines with firm, set habits—marionettes—dolls.

"Business is put above learning, administration above education, discipline and order above cultivation of genius and talent. Our schools and colleges are controlled by business men. The school-boards, the boards of trustees of almost every school and college in the country consist mainly of manufacturers, storekeepers, tradesmen, bulls and bears of Wall Street and the market-place. What wonder that they bring with them the ideals and methods of the factory, the store, the bank and the saloon."

From time to time the "educational" methods of our philistine teachers are brought to light. A girl is forced by a schoolma'am of one of our large cities to stay in a corner for hours, because she unintentionally transgressed against the barrack-discipline of the school regulations. When the parents became afraid of the girl's health and naturally took her out of school, the little girl was dragged before the court by the truant officer. Fortunately, "the judge turned to the truant officer and asked him how the girl could be a truant, if she had been suspended. He didn't believe in breaking children's wills." In another city a pupil of genius was excluded from school because "he did not fall in with the system" laid out by the "very able business-superintendent."

"Our schools brand their pupils by a system of marks, while our foremost colleges measure the knowledge and education of their students by the number of 'points' passed. The student may pass either in Logic or Blacksmithing. It does not matter which, provided he makes up a certain number of 'points!'

"College-committees refuse admission to young students of genius, because 'it is against the policy and principles of the university.' College-professors expel promising students from the lecture-room for 'the good of the class as a whole,' because the students 'happen to handle their hats in the middle of a lecture.' This, you see, interferes with class discipline. *Fiat justicia, pereat mundus.* Let genius perish, provided the system lives. Why not suppress all genius, as a disturbing element, for 'the good of the classes,' for the weal of the commonwealth? Education of man and cultivation of genius, indeed! This is not school policy.

"We school and drill our children and youth in schoolma'am mannerism, schoolmaster mind-ankylosis, school superintendent stiff-joint ceremonialism, factory regulations and office dicipline. We give our students and pupils artisan inspiration and business spirituality. Originality is suppressed. Individuality is crushed. Mediocrity is at a premium. That is why our country has such clever business men, such cunning artisans, such

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resourceful politicians, such adroit leaders of new cults, but no scientists, no artists, no philosophers, no statesmen, no genuine talent, and no true genius."

The red tape of officialdom, like a poisonous weed, grows luxuriantly in our schools and chokes the life of our young generation. Instead of growing into a people of great independent thinkers, the nation is in danger of fast becoming a crowd of well-drilled, well-disciplined, commonplace individuals, with strong philistine habits and notions of hopeless mediocrity.

In leveling education to mediocrity we imagine that we uphold the democratic spirit of our institutions. Our American sensibilities are shocked when the president of one of our leading colleges dares to recommend to his college that it should cease catering to the average student.

"Awaken in early childhood the critical spirit of man; awaken, early in the child's life, love of knowledge, love of truth, of art and literature for their own sake, and you arouse man's genius. We have average mediocre students, because we have mediocre teachers, department-store superintendents, clerkly principals and deans with bookkeepers' souls, because our schools and colleges deliberately aim at mediocrity.

"Ribot in describing the degenerated Byzantine Greeks tells us that their leaders were mediocrities and their great men commonplace personalities. Is the American nation drifting in the same direction? It was the system of cultivation of independent thought that awakened the Greek mind to its highest achievement in arts, science and philosophy; it was the deadly Byzantine bureaucratic red tape with it cut-and-dried theological discipline that dried up the sources of Greek genius. We are in danger of building up a Byzantine empire with large institutions and big corporations, but with small minds and dwarfed individualities. Like the Byzantines we begin to value administration above individuality and official, red-tape ceremonialism above originality.

"We wish even to turn our schools into practical school-shops. We shall in time become a nation of well-trained clerks and clever artisans. The time is at hand when we shall be justified in writing over the gates of our school-shops 'mediocrity made here!'"

To make matters worse, the country is filled with a smug self-satisfaction on the subject. The Americans think they are educated.



## DR. BURRAGE, PRUDENTIAL MEDICAL CHIEF, IS DEAD.

Newark, N. J. October 30, 1911.—Dr. Robert Lowell Burrage, Medical Director of The Prudential Insurance Company, and chief of the company's staff of 11,000 medical examiners in the United States and Canada, died October 29, 1911, at his home, 211 Lincoln avenue, Orange, N. J., of heart disease.

Dr. Burrage was 54 years of age and had been with The Prudential nearly 22 years. He graduated from Bellevue Hospital Medical College, New York City, in 1878, and held a conspicuous position among medical men in the life insurance profession. Dr. Burrage leaves a widow and one son. Dr. Burrage's death came unexpectedly, the official cause being given as myocarditis.

A strange coincidence in connection with the death of Dr. Burrage is that it occurred on the anniversary of the death of the late Edward H. Hamill, Consulting Medical Director of The Prudential, on October 29, 1910. Dr. Burrage, Dr. Hamill and Dr. Leslie D. Ward, former vice-president of The Prudential, who died in Europe a year ago in July, had been closely associated in the direction of the medical work of the company for more than twenty years.

Dr. Burrage was born in Newark, June 14, 1857, of English parentage. Upon graduation from Bellevue Hospital

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Medical College, Dr. Burrage practiced in Newark. He entered the medical department of The Prudential in January, 1890, and in 1898 was made Associate Medical Director. After ten years he was promoted to Medical Director of the Company and placed in entire charge of the company's vast army of medical examiners, as well as the medical department of the home office.

Dr. Burrage was a man of unusually robust health, and traveled widely for the company. He addressed nearly all the important agency conventions of the company in recent years. He had a wide medical experience in the life insurance field, and while of a naturally retiring disposition, was extremely popular with his associates, by whom his death is severely felt. He was a man of clear medical judgment and eminently practical in his work. His writings on tuberculosis were widely distributed by the National Association for the Prevention of Tuberculosis.

Dr. Burrage was a member of the American Medical Association, and one of the Executive Committee of the International Medical Directors' Association. His death is a big loss to those associated with the medical work of The Prudential.



## ATTENTION TO LITTLE THINGS.

Chas. E. Warren, in the *Medical Fortnightly*, reminds us that it is human nature to long for pretense and show. The druggist who has the largest plate-glass windows, the largest soda fountain, the greatest display within and without, is the most popular.

The druggist who dispenses your prescriptions in clear-glass bottles, with capped corks and other frills, is thought more of, and consequently has a larger trade than one who put it in cheap, green-glass bottles, and wraps it in a scrap of newspaper, although the latter may be far more scrupulous in the compounding and conscientious regarding the purity and quality of the ingredients.

The doctor who lives in the "swellest"-front house, who has the latest model of automobile, who dresses in the latest style, who makes the greatest display, will have the largest list of patients, if not the wisest, but of this more anon.

The doctor who prescribes drugs not in the common list, as commonly known, will gain a reputation for knowledge and progressiveness. But he who neglects to write a prescription for sodium chloride, C. P., and aqua destillata, when he desires to use a solution of salt, but merely asks for some salt and water from the kitchen, is apt to be branded with contempt and called an old fogy, away behind the times, who has not gone beyond the age of simples.

The public, in fact, does not want to be commonplace or economical in sickness, say what they may. They will put off calling the doctor until the eleventh hour, but when they do call him they want to get their money's worth of attention.

In the urgency of acute illness all care for appearance is cast aside, nor do they question the means. But let the danger pass, let the crisis be o'er, and convalescence ensue, and all the innate pride for good appearance manifests itself in the best nightgown for the patient, the best spread and comforter for the bed, and numerous useful, more often uselessly ornamental accessories deck the table and otherwise adorn the room.

Should we ask the reason why this is done, we should be indignantly told it was, of course, for love of the patient, that daintiness of environment is a powerful adjunct in the recovery of the invalid, a sentiment which cannot be denied, but it is also true, although the statement would meet with indignant denial, that it is partly for effect, to impress the doctor and sympathizing visitors with the display.

Realizing this, the doctor who is politic will take due notice of this weakness of

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human nature and notice some of these adornments of the sick-room with a true-hearted note of admiration, if he wishes to impress a good opinion of himself upon those with whom he comes in contact in his daily routine. For good opinion is reciprocal.

Moreover, patients and their friends will take due notice of the physician who is well equipped with conveniences, useful, if not necessary, but of a more or less attention-attracting character.

In the practice of medicine, as in other things, it is not the man who is "just like other folks" that gains fame; it is the one who is "different." Not ostentatiously so, but just sufficiently different to make folks "sit up and take notice."

A chronograph watch, for example, with its long sweeping second hand, is not only desirable for its usefulness in "taking the pulse,' but folks will say of the doctor who has one, "he is so accurate and painstaking, he has a doctor's watch for counting the pulse," and the neighbors who hear this gossip will think they would like that kind of a doctor, and when in need will govern themselves accordingly. Nor is such a watch and similar things within the reach of the wealthy practitioner only, for a good watch, with a "timing second hand" may be bought for $5.75. Certainly, the benefit therefrom is worth more.

## QUACKERY IN THE EAST.

An Indian correspondent to *The Lancet* has sent some pages from a price-list issued by a native saddler in Cawnpore. This correspondent remarks that it is a unique example of the extremes to which uncontrolled quackery can run, and that it shows the type of remedy for which there is a demand in India. Incidentally, he adds, the advertisements have a humorous aspect, and with this we find it hard to disagree. The catalogue of the Medicine Dapartment of Messrs. Mohamed Shafi and Co. has for its text the admirable sentiment, "Health is the Life of the Body," and it fills seven quarto pages. The 80 or so preparations (which are all compounded under the eye of "a very able doctor," Mohamed Sayed) cost from 1 to 5 rupees each, and they are guaranteed to be infallible remedies for almost all the ailments and disabilities to which mankind is heir. An "Oil for the remedy of the errors of youth" is especially recommended, and a Tonic for Weakness which "proves to be a stuff for old people." But there is something for everybody in Mohamed Shafi's price list, and no one need despair who has a rupee or two to invest. Barrenness, baldness, and bugs disappear like the mists of morning, and "foreign humours" can be driven from a "disorderly stomach." A charm for removing snakes and scorpions can be bought for the same price as a specific for small-pox marks which "removes the complexion." With reference to condensed milk at 12 annas a tin, "the public are informed not to be deceived by buying cheap and superious milk." Prophylactic bangles and lockets cost only 2 or 3 rupees each and effectually ward off "cholera weakness, cold, thinness, fever cough, inflammation of the eyes, erysipelas, indigestion, small-pox, impurity of blood, fits, and many other diseases to which children are subject." A plaster which has cured hopeless cases will "heal any old man and obstinate ulcer," while if Tooth Oil is used intelligently the user for the rest of his life "will have a set of unshaken teeth." Jawahar Mohra (or Tone Restorer) "makes a man patent," and Sukha cures "infants who pine away and ultimately die." Although "the inflammation of kidney is fatal," Mohamed Shafi has a remedy which never fails to cure it, and the price of a box is 2 rupees. Should you wish to give up opium, chandoo or spirituous liquors, he has a "life-saving thing which will relieve you radically" for 5 rupees the bottle.

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# REFRACTION.

### THE PERCEPTION OF LIGHT AND THE SENSE OF COLOR.

TWO recent papers read by Dr. F. W. Edridge-Green before the Royal Society and the Phys. Section of the British Med. Association, have an interesting bearing on the principles of color perception.

The first of these papers contains particulars of tests by the spectrometer method on a variety of color-blinds. It has often been pointed out that tests of color-blind people, which ought to afford *confirmation* of a correct theory of color-vision, often yield results which it is extremely difficult to reconcile with the older theories. Dr. Edridge-Green lays stress on this point, and has come to the conclusion that it is only by discriminating between the power of distinguishing color and the capacity to see light that consistent results can be obtained. Thus a shortening of the spectrum at one end may coexist with normal powers of analyzing color, and may interfere very little with the general perception of shade. Again, it is difficult, except by separating the senses of light and color, to explain the variation in the luminosity curves of different color-blinds; in some cases the curves resemble those of ordinary vision, in others they are quite peculiar. A. Koenig, for example, has pointed out that, even in the case of people credited with normal vision, considerable variations in this respect exist, while one so-called "green-blind" had almost the same curve as himself and a normal sighted woman.

The second paper deals with another item in Dr. Edridge-Green's work, namely, the suggestion that visual purple is not non-existent in the "yellow spot" on the retina, as was recently supposed, but can find its way in between the cones. All the peculiar phenomena connected with the behavior of the eye at low illuminations, previously explained by crediting the rods and cones with distinct functions, are, on this theory, due to the ebb and flow of the visual purple towards the central retina.

This paper describes a new method of actually demonstrating the movements of the visual purple. After gazing a moment through certain color solutions and then shutting the eyes, an image of the yellow spot becomes distinctly visible. Again (as was long ago discovered by Purkinje), if light is concentrated on the eye while the subject looks at a dark background the vessels of the retina and the yellow spot can be distinctly perceived. Dr. Edridge-Green describes quite a number of methods of studying the eye in this way, and draws attention to a curious phenomenon thereby made visible, namely, the presence of "whirling currents" apparently revolving around the yellow spot, and altering according to the nature of the illumination. These he suggests are not due to the circulation, but are actual streams of visual purple flowing into the fovea. Those interested should read Dr. Edridge-Green's paper for fuller details of these effects and how they are produced. They may possibly also prove of value in affording information on some obscure points in photometry and also as indicating a possible means of studying the influence of glare.

### CONGENITAL COLOUR BLINDNESS.

Where the appeal of the special senses is concerned, says G. H. Taylor in the *Australian Medical Journal,* it is necessary for a trained mind to form its judgment from a critical experience of a large number of minds. By this method

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an intelligence, although it may have a defect in one or more of its special senses, may be able to correctly record the effect of an appeal upon the mind of other persons. An intelligent moral blind person may perceive this effect and use it for gain. A sanctimonious criminal is not uncommon. One of the leading authorities upon the subject of colour blindness is himself blind to colour (Professor Nagel). A person may have a keen condition of his special senses and be highly educated, his criticism of the work done by others may be sound, and yet he may be unable to acquire the dexterity necessary to interpret the music of a master or to excel as a painter. The center in his brain which deals with the movements of the hand, and the center which is concerned in the appreciation of form may transmit a deficient appeal to the mind. One of the earliest sensations of a new-born child is a perception of light and dark—of black and white. These conditions remain in alternate evidence during the life of a person who can see. It therefore, under ordinary conditions, does not make any special appeal to the mind. It is different with colour. The face of a young child shows emotion to colour, particularly to red, and red remains the colour with the strongest appeal to a great majority of persons. It excites to a greater degree than green, because of its comparative rarity and because of its association with human life and health. It causes an emotion of pleasure in the mind of a person with a keen colour sense when it is perceived in contrast to green in the form of a flower. With barren and grey surroundings, a person with a keen colour sense exhibits emotion when he perceives green. A red-green blind participates in none of these emotions. With an equally intelligent mind he has merely the appeal of black and white and the varying degree of shade which bridges the one from the other.

## EXTRINSIC MUSCLE TESTS.

S. P. Ward, in the *Optical Review and Journal,* remarks that many refractionists now consider a test of the muscle balance as much a part of every examination, as is the record of visual acuity. Many others make a perfunctory test only in those cases where a marked diplopia is present and cannot be ignored; and some diresgard muscular imbalance except where prisms have been worn.

Probably the chief reason for not making such tests is the pretty general assumption that they require great ability and technique, but few people will deny their value as part of a thorough test.

Assuming that the supposed technicality required in the use of prisms is the reason for the neglect shown, it follows that any means by which they might be more simply used would remove all difficulty.

Several instruments have been devised to make muscle testing simple, and while the personal ability does enter into the accuracy of the results, no one need hesitate through diffidence to at least make a fair test of the different phorias.

The Stevens' Phorometer is practically a trial frame with spirit level, in the two cells of which are prisms in geared rings, managed to rotate in conjunction with each other, and so fixed that the prism bases are opposite each other in whatever meridian they may be turned. By this instrument exophoria, esophoria and hyperphoria may be quickly and accurately determined, and the result indicated on a scale, as one reads the cylinder axis in the trial frame scale.

The Risley rotary prism is a combination in a single cell, of two 15° prisms which may be rotated with regard to each other, to give any prism power from neutrality to 30°, by turning a milled button at the side. The combination of prisms may be turned in the cell to bring the prism effect wherever required for

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testing the different muscles. It is excellent for duction tests and for prism exercise.

The Hazen kratometer is a larger instrument on a table stand or clamp and makes use of prism batteries.

The phoro-optometers combine the Stevens' Phorometer with Maddox rod and Risley prism, and a trial frame for lenses, and forms the most complete prism test available. It may be had with either floor stand or with wall or chair bracket. A rack and pinion adjustment for height, and a spirit level permits fine adjustments, and makes it easy to determine when the instrument is level. The Risley prism is mounted in a swinging cell by which it can be moved to one side, and is provided with spring clips to indicate the proper position of the vertical and horizontal prism base, and prevents deviation during use. A multiple red Maddox rod which may be rotated in its cell is mounted so as to be swung aside when not required.

At the back of the instrument is a three-cell trial frame, the cylinder cell of which may be rotated by small wheels at the sides. Over the top is an adjustable forehead rest, no bridge being required. This trial frame accessory is provided with a screw adjustment for pupillary distance, and a scale to indicate it in millimeters.

In front of the instrument is a removable arm, which carries a sliding card holder for use in all near-point tests.

Another and later instrument combines with the one last described, a battery of spherical lenses mounted in disks which may be rotated to give any spherical value by eighths of a diopter from minus 10 to plus 8; and in quarter diopters from minus 19.75 to plus 15.75. By adding a lense at the back a wider range may be had, if required. This instrument forms a complete trial case, except for cylinders, and the addition of a variable cross cylinder would make of it a complete trial case. These phoro optometers may be had with two Risley prisms instead of only one, for use more particularly in prism exercise. The illustration shows the instrument equipped with extra Risley prism.



## COMFORTABLE DISTANCE CORRECTION.

R. M. Lockwood, in the *Optical Jaurnal and Review,* calls attention to the fact that, although the accommodation and convergence are functions that are mainly the result of long mutual use and habit, still there is a certain strong inter-relation of the two which must be regarded if comfortable vision is to be given with glasses. When the eyes fix an object of regard, which means that there is single vision with consequent convergence, which is very exact as the visual centers strongly oppose diplopia, there comes an innervation to make the convergence just right, or a succession of innervations, each correcting the errors of the previous ones, and with these innervations to convergence there also comes a corresponding innervation of the ciliaries, which results in accommodation. Theoretically, the two functions should each be exactly correct, but practically this often does not happen; the convergence will be right, but the accommodation will be a little short, or a little over, the visual centers preferring to accept a slight blur of the retinal images rather than to make the extra effort to get a perfect image. In such cases the convergence and accommodation are not in harmony, but by the application of lenses of the right power and the right kind the two functions can be brought into harmony, when the vision will be the most comfortable attainable. The tests already made have settled the value of the cylinders, which is merely the measure of the difference in power of the two principal meridians of the eye; what we are to find is the

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sphere which we must add to this to get the most comfortable vision, first for distance and then for near. To this end starting with the distance correction, leave in place the finding already gotten which is the cylinder selected and the static sphere; set the cross lines chart at oblique axes, put in front of the correction in the frame a cross cylinder plus .50 on a minus .50, which can be supplied by the optical houses mounted on a long handle, and make the axes of this cross cylinder exactly agree with the cross lines on the chart. The patient is to state which of the two shows the blackest and with the clearest edges between the black lines and the white interspaces. Should he say that the lines agreeing in direction with the plus axis of the cross cylinder are the best, then more plus must be added, which rarely happens; if he says the lines agreeing in direction with the minus axis of the cross cylinder are the best, then the minus spherical power must be added to the correction. To make sure the cross cylinder may be turned in the fingers so as to reverse the comparison with the test lines, when if there is a different result the average of the two observations can be taken. This test will give the sphere, instead of the static sphere previously found, which makes for the easiest vision, and should be the sphere prescribed in the first pair of glasses. The direction of the lines in the test do not necessarily have to be oblique as here stated; they may be set at any angle, the axes of the cross cylinders to be made to exactly agree, but as most eyes are unduly sensitive to the recognition of vertical lines, due to their long practice in reading print, it is better to avoid, as far as possible, the use of lines which are vertical or near thereto. In this test the cross cylinder used forms no part of the correction; it is simply the test lens to find the comfortable sphere. Its action is to blur one meridian myopically and the other hyperopically to equal extents. This test is based on the idea that when we look at a chart with nothing but crossed lines on it we tend to accommodate for the distance of the chart, or for the chart as a whole, and when by the application of the right lenses we are exactly accommodated for that point which is also the point for which we converge, then the two lines or sets of lines will be seen equally clear, or rather equally unclear, for they are both blurred half a diopter; when this point is reached the two functions are in exact harmony. In this test the patient will usually note one set of lines as narrower than the others, but clearness of edges is the important point.

## VISUAL REQUIREMENTS IN U. S. ARMY.

"Vision, as determined by the official test-types, must not fall below 20/40 in either eye, and not below 20/20 unless the defect is a simple refractive error not hyperopia, is not due to ocular disease, and is entirely corrected by proper glasses.

"In the record of all examinations, the acuity of vision without glasses, and also with glasses when the acuity is less than 20/20, will be given for each eye separately; in the latter case the correction will also be noted.

"Hyperopia requiring any spherical correction, anisometropia, squint or muscular insufficiency, if marked, are causes for rejection.

"Color-blindness, red, green or violet, is cause for rejection."

" . . . In the examination of cadets, except those on probation, discharge will not be recommended except for some cause which disqualifies for the duties of a cadet or is likely in the future to impair his efficiency as an officer of the Army. Defects of vision, however, must in all cases be entirely corrected by glasses." G. O. 176, '06.

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**Second Lieutenant from Civil Life.**

The visual requirements are satisfied by a candidate who has "20/40 in either eye, or who is not color-blind for red, green or violet."

G. O. 59, '08.

**Medical Corps.**

"Errors of refraction, if not below 20/40 in either eye, are not cause for rejection, provided they are not accompanied by ocular disease and are entirely corrected by appropriate glasses."

**Hospital Corps.**

"Applicants may be accepted with a vision of 20/70 in either eye, correctible to 20/40 with glasses, provided that no organic disease exists in either eye."

G. O. 256, '07.

**Enlisted Men of the Line.**

Enlisted men of the line of the Army and of the Engineer and Signal Corps, a minimum of 20/40 for the better eye, and of 20/100 for the poorer, provided that no organic disease exists in either eye.

Enlisted men of the Ordinance, Subsistence and Quartermaster's Departments and for the Hospital Corps a minimum of 20/70 in each eye correctible to 20/40 with lenses, provided that no organic disease exists in either eye.

Recruits may be accepted for the line of the Army when unable with the better eye to recognize all of the letters on the 20/40 line, provided that they may be able to read some of the letters on the 20/30 line.

Circulars 4 and 5, 1908.

Reference to the "better eye" in the preceding requirements indicates the right eye, it having been determined that shooting from the left shoulder is undesirable.

**Proposed Requirements.**

The proposed requirements which have been presented by the commission appointed by General Torney are as follows:

**I. Requirements in the U. S. Military Academy.**

*For Entrance.*—A minimum of 6/6 vision in each eye. If hypermetropia be present, as detected by the test lenses, a manifest of more than 1 D. will exclude. The muscle error at 6 meters shall not exceed a hyperphoria of 2°, an exophoria of 5°, or an esophoria of 8°. Color-blindness, red, green or violet, is cause for rejection.

*For Graduation.*—A minimum of 6/12 vision in one eye and of 6/18 in the other, but capable of being corrected to 6/6 in each eye by proper lenses, is requisite.

**Addenda.**

Examination shall be made of the eyes of all cadets at the commencement of each academic year and if at any time during the course vision is found to have deteriorated to a degree greater than is required at graduation, the cadet shall be dropped. When a refraction error exists, cadets shall be commanded to wear the glasses prescribed for them precisely as directed by the medical officer in charge.

**II. Second Lieutenant from Civil Life.**

A minimum of 6/12 in one eye, and of 6/18 in the other, capable of correction in each to 6/6, and a normal color sense are requisite. The muscle error at 6 meters shall not exceed a hyperphoria of 2°, an exophoria of 5°, or an esophoria of 8°.

**III. For Promotion.**

For advancement through the various grades short of that of major, uncorrected vision must equal at least 6/24 in one eye and 6/30 in the other, and corrected vision, 6/6 in one eye and 6/12 in the other. For promotion to the rank of major and all higher grades no definite visual standard is required. The eyes, however, shall be carefully examined in each case, and if in the opinion of the Examining Board their condition is such that they render the performance of the military duties peculiar to each rank impossible, the officer shall be recommended for retirement.

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**IV. Medical Corps.**

*For Entrance.*—A minimum of 6/18 is requisite in each eye, which is capable of improvement to 6/6.

*For Promotion.*—Uncorrected vision shall not fall below 6/30 in one eye and 6/60 in the other, and corrected vision shall equal 6/6 in one eye.

**V. Hospital Corps.**

For entrance and promotion, a minimum of 6/21 is requisite in either eye, which is capable of improvement to 6/6 in one eye and at least 6/12 in the other.

**VI. Enlisted Men of the Line of the Army and of the Engineer and Signal Corps.**

A minimum of 6/12 for the better eye and of 6/30 for the poorer is requisite.

**VII. Enlisted Men of the Ordnance, Subsistence and Quartermaster's Departments and of the Hospital Corps.**

A minimum of 6/21 for the better eye, and 6/30 for the poorer is requisite, correctible to 6/6 and 6/12, respectively.

**Other Causes for Rejection.**

Apart from the visual standards which have just been described, and the restrictions as to muscle error and defects in the color-sense imposed in certain branches of the service, the presence of any structural changes or inflammatory conditions of the eyeball or its adnexa, such as might lead to impairment of vision later, are causes for rejection in all departments of the Army. Candidates whose eyes present merely the results of former inflammatory processes may be accepted, provided the eyes are entirely free from inflammation at the time of the examination, and that they possess the necessary degree of vision, and that the sequelæ of the previous inflammation have entailed no serious impairment in the structure of the eye or its adnexa.

**Directions for Carrying Out the Tests.**

In testing the degree of visual acuity and of the balance of the extraocular muscle, the candidate must be seated exactly at 6 meters from the charts and the light used in the muscle test, and this distance must never be varied. (Six meters shall be regarded as equivalent to 20 feet.)

For purposes of uniformity and to guard against the possibility of any deception on the part of the candidates, all tests shall be made with the standard charts issued by the department. These shall be exhibited to the candidate in a good natural or artificial light at a height of 4 or 5 feet from the ground. In the tests made at the Military Academy, the charts shall be illuminated by the Williams battery of electric globes, with daylight excluded from the room.

Each eye shall be tested separately and the examiner must exercise the greatest caution that the eye which is not under examination shall be properly excluded. During the performance of the test the lids must remain naturally open, squinting being prohibited. In the event that the candidate is unable to read all the letters on the line designated as his minimum vision, he will be passed, provided he is able to read three of the letters on the next smaller line with both eyes directed on the chart.

The manifest hypermetropia shall be detected by testing each eye separately, either by the so-called fogging system of first holding a + S. 3 D. or 4 D. lens before the eye and then gradually abstracting from its strength by holding — S. lenses before it until 6/6 vision is attained, or by beginning with a + S. 0.25 D. and gradually increasing the strength of the lens until the letters on the 6/6 line are no longer visible.

The muscles of candidates at the Military Academy and of second lieutenants from civil life shall be tested with the Maddox rod, and a set of prisms. Their color-sense shall be ascertained by the tagged Holmgren worsted test of Williams.

L. Webster Fox,
George E. de Schweinitz,
Myles Standish,
William Campbell Posey, Chairman.

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# THE SICK ROOM.

### WEIGHING THE BABY.

DR. FRANCIS H. MacCARTHY gives in his recent book, the following valuable information as to growth and development of the child during the first year. "During the first three or four days of life, before the flow of milk becomes established, the infant usually loses from five to eight ounces. After nursing begins, however, this is soon regained, usually by the tenth day.

"From this time on through the first three months the infant should gain steadily from five to seven ounces a week. During the next three months the gain is slightly less, varying in different children from three and one-half ounces to five ounces a week.

"From the sixth to the twelfth month the gain is about three and one-half ounces a week.

"The child with an average weight at birth of seven and one-half pounds would weigh at:

| | | |
|---|---|---|
| Three months | 12 to 13 | pounds |
| Six months | 15 to 16 | pounds |
| Nine months | 17 to 19 | pounds |
| One year | 20 to 21½ | pounds |

"It is interesting to note that a healthy baby will double its birth weight at five months, and at one year it will weigh almost three times as much as it did at birth.

"Babies fed from the bottle seldom gain as rapidly during the first month as infants fed at the breast, for the reason that it takes some weeks for the stomach to become accustomed to cow's milk, and during this time the milk must be weakened or the child's digestion will be disturbed. After this time, however, if the milk is prepared carefully, usually the gain will be about as regular as in nursing infants.

"While most healthy babies gain steadily during the first year, it should be remembered that there are certain times when no gain is made and the weight remains about the same. This may occur while the child has a slight cold or is cutting teeth, and sometimes during very hot weather.

"After the first year the gain in weight is not so continuous, and there are many interruptions which often occur without apparent cause. The weight and height of an infant must necessarily depend to some extent upon heredity and the conditions surrounding the mother before the baby is born. It is apparent, then, that no one rule or table of measurements will apply to all children, and that only average figures can be given.

**"Table Showing Weight and Height of the Average Child.**

| Age. | Weight. pounds. | ounces. | Height. inches. |
|---|---|---|---|
| At birth | 7½ | .. | 19½ |
| Two weeks | 7 | 10 | .. |
| Three weeks | 8 | 1 | .. |
| One month | 8 | 8 | 21 |
| Two months | 10 | 7 | 22 |
| Three months | 12 | 6 | 23 |
| Four months | 13 | 13 | 24 |
| Five months | 15 | 4 | 24½ |
| Six months | 16 | 3 | 25 |
| Seven months | 17 | 2 | 25½ |
| Eight months | 18 | 1 | 26 |
| Nine months | 19 | .. | 26½ |
| Ten months | 19 | 14 | 27 |
| Eleven months | 20 | 13 | 27½ |
| Twelve months | 21 | 12 | 28 |
| Eighteen months | 23 | .. | 29½ |
| Two years | 27 | 8 | 33 |
| Three years | 32 | .. | 36½ |
| Four years | 36 | .. | 38¾ |
| Five years | 40 | .. | 40 |
| Six years | 44 | 8 | 44 |
| Seven years | 48 | 8 | 46 |
| Eight years | 53 | 8 | 48 |
| Nine years | 59 | 8 | 50¾ |
| Ten years | 65 | .. | 52 |

"Some children may weigh less than the figures in the table and still be in thriving condition, while it is not at all unusual for many children to exceed these figures. When, however, an infant

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is very much behind in height and weight the mother should at least suspect that something is wrong, and if in addition to loss of weight the child cries excessively, looks thin and pale, or is constantly sucking its fist, she should seek medical advice."

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### CARE OF THE NEW BORN.

When urination is delayed immediately following the birth, says a writer in the *Nurses' Journal of the Pacific Coast,* try a warm sitz bath for the baby and give plenty of water, not too cold, to drink.

When the baby suffers frequently from colic and is troubled with rumbling in the bowels and general restlessness, an irrigation of the colon with salt solution, using a medium sized soft rubber catheter, will usually give relief. The solution should be injected a little at a time and continued till it returns clear.

The weaker the baby the more it becomes exceedingly important to prevent heat loss. To keep the baby thoroughly warm, to prevent chilling at any time, and to keep the supply of air pure, are all important points to be watched.

When the cord remains constantly moist a washing with alcohol, about 95 per cent., will help to improve conditions. The navel should always be regarded as a wound, requiring the most exact surgical cleanliness.

When the baby has difficulty in nursing, the application of a hot fomentation to the breast before each nursing, over the nipple, will help to lessen the trouble by bringing the milk to the surface.

A great deal can be learned as to the child's condition by carefully observing stools. The normal stool in the newborn is dark green for two or three days, gradually becoming brown. The change from brown to yellow is gradual, and by the end of the first week the stool should be a golden yellow. When a baby is not getting sufficient food the color of the stools will remain brownish rather than yellow.

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### CLOTHING THE CHILD.

Mrs. Kellogg, in *Good Health,* admonishes that many growing children are permanently injured by wearing ill-fitting garments which have been purchased ready made. Such clothing being cut in large quantities after a fixed model and graded according to age rather than size, is sure to be a misfit for the child larger or smaller than the average for his years. Again, these garments are usually made of the same width across both chest and back, whereas to allow for proper expansion of the lungs clothing should be fuller over the chest. Under the restriction enforced through wearing of such garments, correct breathing is impossible.

A similar result is often occasioned by the wearing of partially outgrown garments or such as have become shrunken through laundering. Mothers who would not think of putting a tight corset upon the tender, growing body, often unwittingly harm the child by allowing it to wear tight bands, tight waists and tight sleeves. Constriction of any part of the body through the wearing of clothing which has become tight because of the child's increased size is quite as injurious as the wearing of tight garments purposely so constructed.

Mothers need frequently to measure both the child and its clothing. Let the little one don its loose nightrobe, and after placing a tape measure about its waist, allow it to take a full inspiration. Note the number of inches expansion and then adjust the child's garment to correspond with the measure of the full inspiration, allowing an additional inch for growth. Measurements of chest, shoulders and other portions of the body should also be taken and the clothing

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changed from time to time to fit the child.

The lives of little children are often endangered through lack of care to keep all parts of the body so clothed as to maintain equable warmth. When from any cause, as insufficient clothing, the arms and limbs become chilled, their blood-vessels contract and some internal portion of the body must then of necessity be overcharged with blood or congested. The frequent or continuous occasion for such congestion always results in lowered vitality and susceptibility to disease.

Every mother must realize, if she but stops to think, that the short skirts and wide-legged cambric drawers, scarcely knee length, which so often constitute the clothing of little children, are inadequate protection for the limbs in any but the warmest atmosphere. In changeable and chilly weather the cool breeze out of doors whizzes through the loose garments as the child runs at its play, and a wave of cold envelops the entire lower portion of the body. Cold extremities seriously interfere with good digestion and sow the seeds of numerous ills.

Undergarments which have shrunken, been outgrown or for some other reason become so abridged in length as to reach only to the knee, thus leaving a space between it and the top of the shoe protected only by a thin hose, are a frequent occasion for congestion. Cold air will chill the little feet and limbs quite as quickly through this less protected space as if the entire limbs were exposed. Variation in the lengths with the weekly changes of garments should be guarded against.

The clothing over the limbs should provide as much warmth as for other portions of the body, if not more, since they are farthest from the source of vital heat. When warmth is needed, it must be supplied by coverings for the feet and legs, not by the addition of knee-length petticoats and dresses.

The custom of providing knickerbockers of the same material as the dress, to be worn in lieu of petticoats and drawers, is a most sensible one, serving the double purpose of more equably clothing the limbs and markedly lessening the amount of washing needed. All through the growing period it should be the purpose to use the fewest garments which will serve to supply the requisite warmth with minimum weight.

The requisite activity of the child should not be hampered by clothing which must be kept spotless at the expense of health born of rollicking play. A play garb is an essential part of every child's wardrobe, made of material easily laundered, simple in design, and so arranged as to give the utmost freedom of movement.

The mother's natural desire to see her little one daintily garbed should not lead her to select some prevailing mode merely because it is pretty, irrespective of its effect upon health and physical requirements. The child's needs are permanent and do not alter with Dame Fashion's caprices. The wise mother will be controlled neither by style nor sentiment, and while dressing her little ones as tastily as possible, will make health and comfort prime considerations.

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## MOUTH WASHES.

Louise Scudder, in *Good Housekeeping*, has the following to say on this subject:

"The mouth is not by any means the only port of entry for germs, but it is a very likely one, and one that we can easily guard. An antiseptic mouth wash is excellent ammunition in this war against invading germs, but be sure that the one you use is antiseptic. Two widely advertised preparations highly

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recommended as a mouth wash and nose and throat spray, were analyzed a couple of years ago by the American Medical Association and shown so far as any germ-killing properties are concerned one might as well have used so much water, which last has at least the advantage of being cheap. One of these preparations was white and fragrant, and the other had a lovely purplish color, a most agreeable odor, and a sweet, pleasant taste; everything to recommend them save real efficiency as a germicide. They had, and yet have, a large sale, and are no doubt of great spiritual comfort to their users! Bicarbonate of soda (ordinary cooking soda) is an excellent mouth wash, as it neutralizes the acids that the fermentation of food produces, and that are most injurious to the enamel. A teaspoonful dissolved in half a glass of water is a sufficiently strong solution. This, however, is not an antiseptic; but a very good home-made germ killer can be made by dissolving in water as much boric acid as the water will hold; that is keep putting in the boric acid until no more will dissolve and you get a sediment in the bottom of the glass. Another excellent wash, but one that is not very pleasant to the taste, is a solution of one part of peroxid of hydrogen to two parts of water. However, if pus is not present, this is very harmful if used continually. These two mouth washes are all cheap and efficacious if not delightful to taste and smell, but one can buy excellent preparations that combine real usefulness with a pleasant taste. However, the use of any of the suggested mouth washes may prove injurious under certain conditions if too long continued, hence it is wise to use the above only until a competent specialist in this line may be consulted.

"Anyone who has ever enjoyed the comfort of having the mouth and teeth in a really sanitary condition," adds the writer, "will never be happy to have them otherwise. It is a horrible thought that we may be carrying around in our mouths all sorts of germs of dreadful diseases, and continually swallowing pus (forgive the word, reader, but no other tells the real facts) that diseased gums throw off. How can a person be healthy or have a good digestion who is allowing such stuff as that to go into her stomach with every mouthful of food? And yet look at the carelessness in this matter that the majority of people show. People who would not dream of sitting down to a meal with dirty hands will be perfectly content to eat all their meals with a mouth and teeth in comparison with which the dirtiest hands would be clean and sanitary. Those who make the biggest 'to do' over the innocent gambols of a fly in the butter, or grow faint at a sight of a mosquito in their tea, may be the very ones whose mouths could give answer to the roll-call of every germ in the calendar. But what they don't see they don't mind."

## VALUE OF RECTAL FEEDING.

The *Therapeutic Gazette* points out that, although during the past decade a number of researches have been published which seemed to prove beyond doubt that so-called rectal feeding is, from the standpoint of nutrition, a practically useless measure, we believe that a large number of the profession still resort to it whenever the condition of the stomach is so deranged, as a result of functional or organic disease, that it is unable to deal with or retain food. Thus, rectal feeding is often used in cases of gastric ulcer, gastric carcinoma, and obstinate vomiting, whether it follow the use of an anæsthetic, whether it be due to uræmia, or whether it complicates the course of pregnancy.

On a number of occasions during the past ten years we have called attention to the researches to which we have just

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referred in the editorial or Progress columns of the *Gazette,* and increasing experience has led us, from the standpoint of the clinician, to place much confidence in the view that the patient who is thought to be fed by an injection into the rectum of predigested foodstuffs is in reality starving, almost, if not quite, as severely as the patient to whom rectal injections are not given. On the other hand, it cannot be doubted that the injection into the rectum of normal salt solution, or of solutions containing nutritious substances, provides the body with a certain amount of liquid which is necessary for its existence, keeps the tissues bathed in their essential fluids, and provides the kidneys with liquid in which they can excrete the solids which it is their duty to get rid of. Almost every clinician of experience knows very well that when a predigested enema of milk and eggs is given, practically all the solid material can be passed or washed out of the bowel twenty-four hours afterward, although all of the liquid may have been absorbed.

In the *Proceedings of the Royal Society of Medicine* for April, 1911, Dr. Brown has reported the results of an investigation which he has carried out upon this subject, and his conclusions are in accord with those who have investigated this field of nutrition in previous years. Dr. Brown concludes that not infrequently rectal injections are the cause of a gain in weight, but this gain is due rather to the absorption of fluid than to the absorption of foodstuffs. It is true that the introduction of dextrose in not more than 5-per-cent. strength in normal salt solution results in all probability in the absorption of a considerable amount of this foodstuff, or at least of a sufficient quantity to put off or prevent the development of starvation acidosis. This is an important consideration, because we have been too prone in the past to ignore starvation acidosis, and to consider it as occurring only as a complication of diabetes, or more recently as a sequel to the administration of chloroform. If more than 5 per cent. of dextrose is used, it is apt to cause irritation and pain.

Referring once more to the matter of how much foodstuff can be absorbed by way of the rectum, it is interesting to recall the fact that Boyd reached the conclusion that it was possible, under very favorable circumstances, to provide the body by this means with about one-ninth of the number of heat units which are necessary for the maintenance of weight. But this possibility is only present in those who do not suffer from rectal irritability and are in the most favorable class for rectal alimentation.

Our contemporary also regards with a good deal of satisfaction and approval the opinions expressed by Dr. Brown, in the article to which we have just referred, concerning other matters associated with the question of rectal alimentation. He well points out that thirst can be relieved by the use of a saline injection better than by the use of a nutrient enema, and that thirst can also be diminished by hypodermoclysis. Then, too, rectal alimentation is a difficult thing to carry out without producing a condition of uncleanliness in the bedding. The exposure which it necessitates, if the injection is to be given skilfully, is objectionable, particularly if patient and nurse are of an opposite sex.



## COLD BATHS IN CHILDREN'S DISEASES.

James Newell, in the *Canadian Practitioner and Review,* warmly advocates the use of the cold bath in children's diseases, attended by high temperature and irritability of the nervous system, and that baths in general, cold, tepid and warm, are not more generally used by our profession is a pity. I feel very cer-

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tain that many of the diseases of children can be just as successfully treated by baths as, and with less subsequent danger than, through the agency of drugs or other potent remedies. When we come across a child lying in convulsions, with a temperature of 104 or 105, rigid, stertorous, and insensible to external impressions, we are very apt to think of inhalations of chloroform, hypodermics of morphia, chloral by the rectum, etc., but in such cases I have seen the happiest results follow the immersion of the child into a bath of 75 or 80 degrees, followed by affusion of cold water over the head, and supplemented by friction of the limbs and body till the rectal temperature dropped to 100, when the child is removed from the bath, and wrapped up with hot-water bags or bottles applied to the extremities, if they should have become blue and cold. In many of the sharp, acute febrile attacks of children, it is often difficult or impossible to say positively why there should be such a rapid and high rise of temperature, and frequently attended by nervous twitchings or actual convulsions. Now, it is just in such cases that I have experienced the happiest results from the bath treatment. I am fully aware that, to stay and superintend the bath treatment takes up time, and that it is much easier and less loss of time to deal out a few acetanilid or phenacetine powders, and tell the mother to give one every hour or two till the fever has dropped down or left, but I have always been suspicious of the after-effects of these drugs in the high temperatures of sepsis, inflammations or diseases due to pronounced organic disturbances.

Cold baths or packs are among our most efficient means of reducing temperature.

The coal tar preparations, antipyrin, phenacetine and acetanilid, are all reducers of febrile temperatures, and may sometimes be employed, but their action is apt to be followed by depression of the nervous system and heart, besides which is their injurious action on the blood, of destroying the red cells and converting hæmoglobin into methæmoglobin.

The use, therefore, of baths to bring down dangerous high temperatures in certain diseases of children, complicated by convulsions, has been followed by me for 30 or more years, and with what I think very successful results. The application of cold water lowers temperature without the bad effects of the coal tar preparations, although I must say I occasionally meet with parents who would allow you to fill their children with powerful drugs with impunity, but who are quite often apprehensive as to the baleful or injurious effects which a bath may have on a sick child.

The stimulating action on the skin, the consequent reflex action on the heart and respiratory centre causing an increase in the general blood pressure, as well as a greater depth in the respiration is productive of very beneficial results, by increasing the oxidation process, increasing diuresis and other metabolic changes, such as rise in the number of red cells and an increase in the quantity of hæmoglobin. Time will not permit me to go into the various *modus operandi* of the remedial actions of baths in the treatment of children's diseases, but if I am permitted to draw conclusions from an experience of thirty or more years, they have proved themselves very efficient and safe therapeutic agents in my hands, and I have many times thought that sufficient space is not given to hydrotherapy in our standard works on children's diseases.

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### OVERLOOKED THE COURT.

Two lawyers before a probate judge recently got into a wrangle. At last one of the disputants, losing control over his emotions, exclaimed to his opponent:

"Sir, you are, I think, the biggest ass that I ever had the misfortune to set eyes upon!"

"Order! Order!" said the judge gravely. "You seem to forget that I am in the room."

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# MEDICAL PHARMACY.

## LEGISLATION AGAINST DISPENSING.

THE following resolution was presented at the recent meeting of the National Association Retail Druggists:

Whereas, Pharmacy is a recognized branch of medicine, and

Whereas, Both medicine and pharmacy have, in recent years, advanced to such a degree as to necessitate a complete separation as professions in order that the best results may be obtained by physician, pharmacist and patient; therefore be it

Resolved, That the following provisions be recommended to the legislative bodies of the respective states for enactment into law, viz.: That after the passage of this Act of Assembly it shall be deemed a misdemeanor for any physician to sell or furnish any patient or other person any drug or medicine, or any instrument to be used in the administration of any drug or medicine; provided, however, that nothing contained in this act shall prevent any physician from administering to such patients as may be under his immediate care such remedies as may be deemed necessary for urgent relief from pain, or where delay may be dangerous. And be it further

Resolved, That where any physician has administered any drug or medicine to his patient direct at his own hands, and death shall occur, that physician shall not, nor shall any other physician as such, certify to the cause of death, but the same shall be placed before the coroner, or other proper legal officer, as the law of each state may provide, for investigation and certification as to cause of death.

A determined effort will be made in many states during the coming winter to prohibit dispensing by physicians.

## INCOMPATIBLE COCAINE MIXTURE.

The following prescription was sent by an Arkansas pharmacist who stated that after several attempts he admitted that he was "beaten," both cocaine and collodion precipitating each time.

Cocainae Hydrochloridi.....gr.xv
Tincture Iodi.....3ii
Collodion Flexile.....3ii
Aquae Ammoniae Fortior.....3ii

N. A. R. D. *Notes* points out that this is an incompatible mixture, both pharmaceutically and therapeutically, and needs rewriting. The Cocaine salt is precipitated and decomposed by the Ammonia; the Collodion, by the same agent, is coagulated. The Tincture of Iodine is like-wise destroyed as such by the action of the Ammonia.

Not only is the Collodion coagulated, but it is decomposed by the action of the stronger Ammonia Water, Nitric Acid being set free. Added to all this, there is great danger in this mixture of the formation of "iodide of nitrogen," which is one of the most violent explosives known.

## AN ANTISEPTIC FORMULA.

Geo. Roberts, in the *Physicians' Drug News,* supposes that most physicians have a formula on which they depend. His is:

Burgess' double sulphide.....1 part
Dehydrated epsom salts.....2 parts
Acetanilide .....2 parts

Finely powdered and mixed.

For burns and scalds, dust on the injured parts and apply absorbent cotton or, better, oxolint.

A bad case of burn from gasoline explosion was treated with this and cured without a scar.

Apply to the umbilicus of new born infants, no further trouble there.

Apply to tender feet, corns and bunions and get prompt relief. As a dusting powder it has no equal.

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Applied to swollen, inflamed gums, allowing it to dissolve in the saliva and swallowing it, relief soon follows, as well as tooth ache. With this I have relieved severe tooth ache and sensitive teeth in ten minutes.

For piles, apply freely and see them melt away.

Internally it is antiseptic and useful for intestinal troubles.

With potassium bichromate for affections of mucous membranes.

It can be combined with the alkaloids, veratrine, aconitine, digitaline and is most useful in all fevers. If used in first stage of fever, after proper elimination, there will be positively no typhoid or pneumonia as the author has demonstrated a long time in my practice.

Practically he has never had any such diseases unless some neglected case treated by another, comes this way. When this is freely used, there will be no necessity for Serum therapy.

Dehydrated magnesium sulphate is made by putting in a pan in a stove oven and evaporating the water of crystallization. This takes away the unpleasant bitter taste.

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## ALCOHOL.

The *British Medical Journal* cites a legend found over the door of a wayside inn in the Tyrol:

Alkohol ist der Menschen grosster Feind,
Aber in der Bibel steht's geschrieben:
Deine Feinde sollst du lieben.
i. e.: Alcohol is the greatest enemy of mankind; but in the Bible is written "Thou shalt love thine enemy."

This, it says, can be paralleled by the profane syllogism obtained by Lord John Russell from an old Spanish priest:

Qui bene bibit bene dormit,
Qui bene dormit non peccat,
Qui non peccat salvatus erit.

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## GUAIACOL IN TUBERCULOSIS.

Norman Roberts, in the *American Journal of Clinical Medicine,* remarks that creosote and other guaiacol-containing substances have, in the treatment of tuberculosis, a long-standing reputation, which, though, is lessened by their evil tendency to upset the alimentary canal when they are administered by the mouth in doses sufficient to produce their full therapeutic effect. Attempts to minimize this defect by admixtures and by combining the active principles as carbonates, sulfonates, etc., have not yet come up to the standard of success. In the absence of a nonirritant guaiacol, and in view of the crying need which guaiacol partially satisfies, we should make more use, than now is the case, of other modes of administration of guaiacol, particularly by the skin.

When guaiacol is freely applied to a considerable area of the skin, on gauze or thin flannel under an impervious covering (oil-silk, sheet rubber, or paraffined paper), enough is absorbed to charge the blood heavily, as is evidenced by the strong odor of the drug in the urine and on the breath. It is probable, moreover, that, if the application is made as near as possible to the tuberculous area (for instance, to the chestwall over an infiltrated apex), the lesion gets a double dose of the remedy, through the general circulation on the one hand, and through local diffusion on the other. Again, the dermatitis which sometimes results from the overaction of the guaiacol on the skin acts beneficially on the principle of counterirritation; whereas the gastroenteritis often produced when guaiacol is administered by the mouth is an unmixed and often a great evil. Furthermore, when one skin area rebels, another can be substituted (whereas, in the human subject, there is but one stomach); hence large amounts can be administered through the skin for long periods of time, continuously or with short rests.

From the standpoint of guaiacol therapy, there are three classes of tuberculous cases, namely: First, those in which the good effect of the remedy (if any) is outweighed by the bad; second, those in which the remedy is useful as a pallia-

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tive, stimulating nutrition and relieving symptoms; and, third, those in which, when the remedy is administered early and adequately and with proper treatment of the patient in other respects, the disease (*post hoc* or *propter hoc*) subsides promptly and permanently. If the practice of administering guaiacol by the skin instead of by the mouth were to become general, we should soon see a large fraction of the first class transferred to the second and probably even a larger to the third. To which class a given patient belongs cannot be determined except by direct trial, but the results in the successful cases justify the attempt wherever there seems to be any hope whatever.

It must be admitted that the treatment is somewhat heroic. The skin may be irritated and at times feel very uncomfortable, while the patient is the center and source of a strong ham-like odor that causes him to be snap-diagnosed and shunned.

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### EFFECTS OF CHLOROFORM ON TISSUES.

G. Herbert Clark, in the *Lancet*, presents the following conclusions drawn from a series of animal experiments:

In these experiments small doses of chloroform were administered to rabbits, and then their weight was taken day by day.

When the chloroform was administered daily, the animal's weight fell rapidly. If given on alternate days, there generally was but little change, although in a few instances a marked reduction in weight took place. When the chloroform was administered by inhalation, the kidneys and liver suffered considerably, the degeneration being greatest in those animals which survived for a longer period. The spleens were invariably engorged with blood, enormous phagocytes being present, and were distended with red corpuscles and often with pigment. The heart-muscles often appeared flabby and the walls were unusually thin. The liver also suffered when chloroform was administered subcutaneously. When given by the stomach the poison was not so rapidly fatal as by either of the two other methods. The average length of life was sixteen days.

The conclusions reached after this important series of experiments were as follows:

1. Chloroform, in small doses, repeatedly administered by the respiratory passages, subcutaneously or by the stomach, rapidly kills rabbits.

2. The liver shows degeneration of the cells sometimes so marked that the whole center of the lobule is broken down into debris. The cells in the center of the lobule are early affected, those further out, later. Fat is always present, generally in large quantities.

3. The kidney suffers to some extent, but relatively more when the chloroform is inhaled than when injected or given by the stomach. Fat is occasionally found in degenerated cells.

4. The spleen shows intense congestion, the sinuses being packed with red blood-corpuscles. Along with the red corpuscles an orange-colored pigment is generally present, which reacts to the stain for iron. A large number of very large phagocytes is present in most instances. The average weight of the spleen was 0.46 Gram heavier than that of the controls when chloroform was inhaled, and 0.59 Gram and 0.17 Gram heavier when injected and when given by the stomach, respectively.

5. Degenerative changes were observed in the cardiac muscles. Fat was not observed in any of the hearts examined.

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### QUININE IN AGUE.

M. G. Price discusses this subject in the *American Journal of Clinical Medicines*. Says he, Let's talk about the drug just a little bit and see for what it is

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fit. There are certain specific conditions in which it will act well; in other words, when the system is in the right condition for the use of the remedy we get something from it. We must have a soft skin; mucous membrane of the mouth moist; tongue moist and inclined to be clean; pulse full, soft; temperature normal or inclined to be so. Then quinine will overcome malaria periodically, but as to taking a "death-grip" on the disease, it won't do it. I have been badly disappointed in the use of quinine, and that not so long ago. The period and amount taken means much in doing even the little that this drug will do.

The remedy should be given when the fever is down and the system in the condition named above; but I generally first purge my patient thoroughly with calomel and podophyllin. I give it the night preceding the intermission, then give enough quinine to cinchonize the patient completely and to have him so when the time comes for the recrudescence. I do not know how much it will take; one will have to find out by experimentation. Every patient is a law unto himself in this particular; but when you have him under control, then the fight is to prevent a return of the attack. Quinine, I say, will not accomplish this. Then what?

Put 2 ounces of nitromuriatic acid and 150 grains of ordinary, old-fashioned sulphate of iron (contused) into a bottle and set aside, uncorked, for twenty-four hours to digest. Of this chemical solution give to 10 to 12 drops in 4 ounces of water every four hours. This is a formula bequeathed by our sainted Brodnax, and it is a "sure cure." There are no recurrences.

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### TANNIN SUPPOSITORIES.

Signorina Bruzzone gives, in the "Italian Bulletin of Pharmacy," the following formula for the preparation of suppositories of glycerin and tannin with gelatin, says the *Chemist and Druggist*.

(1) Dissolve 4 grams of tannic acid and 4 grams of borax in 90 grams of glycerin. (2) Add 12 grams of gelatin to 40 grams of water, and leave it to soak well. Then add the latter little by little to the first solution. Warm gently on a water-bath, stirring constantly, then pour into moulds previously cooled.

The authoress shows that tannic acid is not present in the form of sodium tannate, as with ferric chloride it yields the reaction which is not given with the salt, and the mass is perfectly transparent, whereas sodium tannate gives a dark-colored non-transparent mass. It is possible that the tannin is present as sodium borotannate, but experience has shown this to be of equal therapeutic value. The absence of gallic acid may be proved by testing with a concentrated solution of sodium chloride, which gives a dense white precipitate not obtained with a boro-gallate. The suppository mass keeps well and retains its therapeutic properties unimpaired indefinitely.

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### THE DOCTOR'S STATIONERY.

Next to the good office equipment and a good appearance of the doctor himself, the *Medical Summary* thinks, nothing gives him a more business-like air than appropriate printing. A doctor should not be ashamed of his printed matter; that is about the only direct way that he can advertise himself and do it ethically. His letterheads, statements, labels and other matter may state his office hours and also his specialty, if he claims the latter. The printing should always be neat and modest. When the doctor's name occupies screaming space at the top of the sheet, it shows bad taste to say the least. Able and intelligent physicians do not use scareheads. Neither are they strong on titles. Many men of fine attainments are satisfied with a simple "M. D." We always smile when we note the modest (?) announcement of "Dr. John Smith, M. D., Physician and Surgeon."

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# ELECTRO-THERAPY.

EDITED BY NOBLE M. EBERHART, A. M., M. D.
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## THE X-RAY TREATMENT OF UTERINE FIBROIDS.

THE *International Journal of Surgery* thinks, from a review of the literature it must be conceded that the X-ray treatment of uterine fibroids has successfully passed the experimental stage and is deserving of serious consideration. While there is strong reason to doubt that it will soon become an active competitor to surgical measures, sufficient has been accomplished to prove its distinct value in certain cases. The only obstacle to its more general use is the tendency to view with more or less suspicion the curative effects of the X-ray, due in a large measure to the exaggerated ideas of its efficacy during the earlier years of its introduction. But it is manifestly unjust to allow disappointment having its source in misplaced enthusiasm to act as a bar to the further discriminating application of a therapeutic agent. It is not too much to say that progress in radio-therapy as well as electro-therapy has been greatly hampered by their injudicious exploitation.

In the last few years, however, a considerable number of observations regarding the value of the X-ray in the treatment of uterine fibromata have been published by competent and reputable clinicians. These demonstrate that when practiced by one experienced in the technic the procedure is attended with little or no risk. Thus, for instance, H. E. Schmidt (*Deut. med. Wockensch.*, No. 29, 1911) refers to four hundred cases with only three deaths—an excellent showing as compared with the general mortality of operation. It would seem from his contribution, however, that the age of the patient has an important bearing upon the success of the treatment, the best results being obtained in women close to or over fifty years of age.

One of the most striking results of Roentgen therapy in appropriate cases is the rapid cessation of the hemorrhage, which sometimes has followed even the first application. As is generally assumed, this effect is due to a direct influence upon the ovaries, and Schmidt ascribes the failures observed to the resistance of the ovarian tissues to the action of the rays, which is particularly marked in women below thirty years, and gradually diminishes with increasing age. The nearer, therefore, the patient is to the climacteric the more certain and better the result. Occasionally, however, it has been found that the metrorrhagia has increased after initiation of treatment, necessitating speedy surgical intervention.

A decided difference of opinion prevails as to the indications of Roentgen therapy in the case of women well-nigh exsanguinated by profuse losses of blood. While Krönig and Gauss prefer this method to operation even in cases where the homorrhage increases after its initial use, Albers-Schönberg advises resort to surgery from the start, or, at any rate, when the first series of X-ray applications is not followed by any diminution of the bleeding. On the other hand, Schmidt has witnessed rapid recovery even in markedly anemic and exhausted patients after a course of Roentgen treatment. In spite of this, however, he

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is inclined to adopt the plan of Albers-Schönberg to refer the case to the surgeon whenever the first sittings are followed by a marked increase of the menorrhagia.

Little is said in the reports published concerning the effect of the X-ray upon the fibroid itself. After all, the arrest of hemorrhage in these cases means the relief of only one of the most serious symptoms, and can but be regarded as a palliative effect. There is evidence, however, to show that in many cases a direct influence is exerted upon the tumor, which undergoes a process of atrophy and contraction. Thus, for instance, in a case to which the writer alluded in a previous discussion of the subject, bleeding was not only permanently arrested, but the growth has been, so to speak, shriveled up to a small fibrous mass. Of course, in cases in which it is of such large size as to exert pressure upon the pelvic viscera the proper treatment is hysterectomy before the patient has suffered the marked cardiac weakness incident to profuse losses of blood or perhaps the degenerative changes in the heart muscles, which have been so frequently observed as concomitants of fibroid disease of the uterus.

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### USES OF THE X-RAY.

Wm. T. Tindale, in the *Vermont Medical Monthly,* reviews some of the surgical uses of the X-ray. He points out that the number of cases of fracture formerly mistaken for contusion or distortion was enormous. It is in such cases that a simple glance with the fluoroscope furnishes the most precise evidence, or better still if a radiograph is taken the nature of the injury can be studied at leisure, and the proper line of treatment easily decided upon without subjecting the patient to any tentative and painful manipulation. Whether there is impaction, or the intervention of muscular tissue, or intra-articular fracture, or fracture associated with a dislocation it can be at once determined.

After a dressing is applied the radiograph shows whether the fragments are in proper position, the dressing itself even if consisting of plaster of Paris offering no obstacle to the rays—perhaps it is needless to call attention to the frequent importance of a radiographic proof in court for the protection of the surgeon, it is evidence that speaks for itself.

A famous surgeon in speaking of the Roentgen ray not long aso said: It is not an agreeable feature of the rays that they have told us how often we have erred in the true recognition and treatment of the various fracture types. In diseases of the bones and joints X-ray examinations and radiography are of great service. Differentiation between bony from other tumors, between inflammatory, tuberculous or osteomyelitic processes, and osteoma, osteosarcoma, atrophy of bone and all joint structures have been clearly established. Now in internal medicine the Roentgen rays are becoming more and more appreciated to their full value. If it is only realized that many of the diseases of the thoracic organs can be recognized and studied by a radiograph, as for instance, pleurisy, pyothorax, pneumothorax, lung abscess, tuberculous cavities and emphysema, the immense importance of the radiograph for internal medicine becomes at once apparent.

The relations of the heart and of the aorta, aneumrysms, mediastinal tumors and arteriosclerosis can be thoroughly studied. Urinary calculi (stone in the kidney or bladder) may very often be shown in a radiograph. If they do not show in a good picture it is not positive proof that they are absent, for some of them, consisting of friable pure uric acid, have such slight density that they make no contrast with the tissues. The denser varieties, even if quite small, show well in any picture where the ver-

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tebrae and other parts are shown in detail. This is one of the most difficult radiographs to take, and to obtain such a picture requires the most perfect technic and a first class apparatus. The size and shape of the stomach may be determined by making a radiograph with an emulsion of bismuth, or of black iron oxide in the stomach. This can be introduced into the stomach and subsequently withdrawn through a tube, and is quite harmless even if swallowed in the ordinary way. The author cites an article a short time ago of rather a peculiar use that the X-ray had been put to, and that is, that it has been used to locate stolen property swallowed by criminals. This is said to have been done at the diamond mines and also in the mint in Japan, and the article also said that a stolen ring had been located in this way in the stomach of a prisoner, in the prison at Davenport, Iowa.

One of the most interesting and important applications of the Roentgen ray is in dentistry. The greater density of the teeth makes them show very well in contrast with the less dense substance of the bones of the jaw. The conditions studied are: the existence and position of unerupted teeth, the extent to which softening and decay have taken place in a tooth; to find the position of roots before regulating, or for bridge work, to recognize pulpless teeth, to determine the presence, cause and extent of alveolar abscess, to discover the extent of alveolar absorption in chronic loosening of the teeth, to detect fracture of roots caused by falls or blows, to find whether a root canal has been filled, to find fluid in the antrum and the detection of unerupted teeth that are causing neuralgia.

A radiograph gives the dental surgeon information in regard to these conditions not easily obtained in any other way.

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## X-RAY TREATMENT OF MALARIA.

Skinner and Carson, in the *British Medical Journal,* report 11 cases of malaria with marked splenic tumor treated by means of repeated exposures of this organ to x-rays. In all the cases, the fever subsided promptly, the spleen became smaller, and the parasites disappeared from the blood. The patients receive no quinine. During the period of convalescence the patients did not show the anemia that often follows prolonged quinine medication. In a number of cases, in which quinine had proved ineffectual, the x-ray treatment was followed by prompt improvement. At present 5 cases of chronic malaria are under treatment by means of the x-ray; it is as yet too early to be certain regarding the outcome. The writers believe that the value of the x-rays in malaria depends upon the destruction by this means of the parasites, either directly or by means of some unknown action of the rays upon the blood. Clearly, their observations require confirmation.

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## ADVANCES IN ROENTGENOLOGY.

The American Roentgen Ray Society, Twelfth Annual Meeting, Sept., 1911.

### Roentgen Rays in Neurasthenia.

Arthur Holding, of Albany, N. Y., expressed his belief that neurasthenia and other neuroses were often caused by conditions which did not have their origin in the nervous system, and which might be detected by the röntgen ray; therefore, it was advisable that all these patients be examined thoroughly by a competent röntgenologist. A few illustrative cases were the following: Case 1, obscure progressive paralysis of the arm, shown by the röntgen rays to be due to a supernumerary rib. Case 2, epileptiform convulsions, shown to be caused by unerupted teeth. Case 3, a very obscure gastrointestinal condition due to cardiospasm. Case 4, neurasthenia with obscure constant pain caused by hour-glass contraction of the stomach. The patient was regarded as a neurasthenic for twenty years. Case 5,

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autointoxication with nervous prostration, regarded as a case of neurasthenia due to visceroptosis. Case 6, neurasthenia proved to be a case of tuberculosis of the lungs. Case 7, neurasthenia cured by the removal of a stone from the kidney. Case 8, patient unable to walk because of pain in the feet and legs, thought to be due to a broken-down arch. The röntgen ray showed an arteriosclerosis in the arteries of the feet and determined the case to be one of intermittent claudication. Case 9, a painful condition of the wrist supposed to be a neuritis, shown, however, to be caused by tuberculosis of the bones. Case 10, severe case of neurosis which proved to be caused by a dislocation of the symphysis pubis.

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**Thoracic Displacements in Phthisis.**

Chas. Lester Leonard, of Philadelphia, Pa., said that compensation for the loss of expansion in the lungs took place through an increase in the capacity of their normal area, or through the interposition between the visceral and parietal pleura of an area filled with air, or fluid, or both. These changes must take place in proportion to the volume of the lungs involved in a pathological process. They were in a measure appreciable by the ordinary methods of physical diagnosis. The changes which could be noted by inspection and mensuration were, however, less marked in ratio with the extent of the disease than those within the thorax, which produced displacements or alterations in the position of the viscera. An internist connected with one of the largest institutions for the special study of tuberculosis did not believe that displacements of the viscera could occur so frequently in the earlier stages of the disease. He said that in some hundreds of post-mortems conducted at the institute they had failed to find such displacements. These pathological variations in the position of the thoracic viscera could be clearly shown only by the rapid röntgenograms that eliminated the heart's motion. Their exact position and interthoracic relations could only be fully appreciated by the rapid stereoröntgenogram. In the entire series of one hundred cases twenty-six displacements of the heart and aorta were found, with three cases of pneumothorax. In seventeen cases the heart was displaced to the right; in four to the left; and in five a rotation took place, with an upward displacement of the heart and aorta, so that the heart assumed an anteroposterior position. In two cases a superficial pneumothorax was found overlying the lower left lung, and in one case an acute hydropneumothorax of tuberculous origin was shown. A review of the cases in the entire series showed that those cases in which no displacement of the viscera was present were early lesions, in which no fibroid change had taken place, or that the lesions were not extensive and symmetrical, or that the heart was bound down by adhesions between the pericardium and the diaphragm. The unequal elevation of the two halves of the diaphragm, Williams' sign, was present in less than one-half of all the cases, and was not present where displacements of the interthoracic viscera had occurred. The pathological displacements of the thoracic viscera in pulmonary tuberculosis were the result of compensation for the destruction of expansive normal lung tissue by the disease. The displacing force was the result of one or two changes, or the combination of both, or, as in the case of acute pneumothorax, from the rupture of the lung. The consolidated lung area might undergo fibroid change and contraction, the contracting tissues drawing the heart and aorta with them, while the emphysematous lung on the opposite side assisted in their displacement. In addition to the displacements which caused compression of the diseased portion of the lung there were

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present in many cases an ossification of the costal cartilages and an approximation of the ribs over the affected area. The compensating displacements might be divided into four groups. Displacements of the lung by superficial pneumothoraces; displacements of the heart upward and into an anteroposterior position; displacements of the heart and aorta to the left; and displacements of the heart and aorta to the right.

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**Control of Fracture Work.**

Roland Hammond, of Providence, R. I., said that the time was near at hand when no fracture or joint injury would be considered to have been properly treated if a röntgen examination had not been made. It was a well-recognized fact that a röntgen plate should be taken after an attempt at reduction had been made to see if the desired result had been obtained. Of almost equal importance was a plate beforehand to know accurately with what condition we had to deal—a fact not appreciated by the profession at large. With the knowledge thus obtained the reduction could often be easily made and with but slight trauma to the parts. Many cases now subjected to open operation and plating could be treated by extension and counter-extension after the method of Bardenheuer and Graessner, with as good anatomical and functional results, and at less risk and greater comfort to the patient. In many cases which seemed irreducible plates made while the patient was under ether and after successive attempts at reduction had been made would often give the clue to the situation, enabling the reduction to be made without resorting to an open operation. Some fractures were irreducible by the above methods and an open operation was necessary. In these cases an absorbable suture material should be used, if possible, reserving wire and plates for cases in which the fragments could be held by no other means.

Arthur Holding of Albany, N. Y., thought it was the röntgenologist's duty to impress on the surgeon that this fracture work must be controlled by the röntgen ray. Only by this means could we determine absolutely whether the approximation of the fragments was as it should be. We must not hesitate to advise the surgeon to sacrifice his pride and reset a bone. In fact the röntgenologist might be in the rather trying position of having to protect the surgeon and the patient. We must be careful, however, when we used the röntgen ray while the patient was still under the ether anesthesia. He had seen several instances where the spark had caused serious damage, even when the tube was not anywhere near the ether can or mask.

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**Diagnosis of Ureteral Kinks.**

G. M. Stover, of Denver, Colo., said that hydronephrosis had heretofore been recognized only in rather an advanced stage, when the dilatation of the renal pelvis was considerable. We had found, and had demonstrated by catheter tests, röntgenograms, and surgical operation that there was easily recognizable a much earlier stage of this condition, to be discovered before dilatation of the renal pelvis had taken place. A certain number of patients complained of pain in one or both kidneys; a pain somewhat like that of the classical hydronephrosis, but not relieved by the sudden passage of a quantity of urine and a disappearance of the tumor, and without the microscopic urinary findings of fully developed hydronephrosis; a pain suggestive but not typical, of renal calculus colic, and in which röntgenographic examination for stone was negative. The symptom-complex in this class of cases had usually been rather vague in its diagnostic indications, and there had undoubtedly been many instances in which a faulty diagnosis had led to operation for conditions which

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were not present, the trouble being laid to an appendix, a tube, an ovary, or a gall-bladder. In the class of cases under consideration it was found by Fowler that the injection of a comparatively small amount of solution (averaging only 14 c.c.) into the pelvis of the kidney produced a pain exactly similar to the pain from which the patient suffered; an injection of the unaffected kidney produced a pain which the patient had never felt there before, but identical with that which had been felt on the other side. They had already examined hydronephrotic cases after collargol injections, and in the course of several conferences on the subject of the röntgenographic examination of the various viscera in which mention was made of the fact that he, as a routine, made röntgenographic examinations of the stomach and intestines with the patient in the erect posture, Fowler suggested that in examining these cases of "intermittent hydronephrosis" the collargol be injected first with the patient reclining and a plate made, then the patient placed in the erect posture and a second plate made. While the patient was in the erect posture he was instructed to make various movements of the trunk, such as would be calculated to dislodge a really movable kidney, and at the same time the ureteral catheter was being withdrawn while a further amount of solution was being injected through it, thus showing röntgenographically the changed position of the kidney and demonstrating the appearance of the ureteral kink. This procedure, as far as they could ascertain, had not been made use of prior to their work.

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**Collaboration in Urological Diagnosis.**

Hunter Selby of Rochester, Minn., thought that co-operative examination opened up additional possibilities, especially in that large group of abdominal cases seen in daily practice which exhibited an indefinite line of symptoms referable, perhaps, to the appendix, gall-bladder, stomach, duodenum, spine, or genitourinary tract, but with a strong possibility of involvement of the genitourinary tract. Such cases required careful study, and some of them taxed every means at our command before we could approach an accurate diagnosis. In St. Mary's Hospital (Mayo Clinic) all such cases were referred to the röntgen laboratories for examination. The routine examination in this clinic might be described as follows:

A full history was taken and a physical examination made. A twenty-four hour specimen of urine was reported on, and, perhaps, a gastric analysis was made—all of which might throw considerable light on the case and yet not clinch the diagnosis. The röntgenologist was then called upon to examine the case, and after the proper preparation of the intestinal tract a set of stereoscopic plates of the upper abdomen and a second set of the lower abdomen and pelvis were made by the rapid method, that is, while the breath was held. If this examination failed to reveal any abnormalities, we had not yet ruled out the genitourinary tract. If, then, in the light of the clinical findings and negative x-ray examination, the diagnosis was still under suspicion, the patient went through a second preparation of the intestinal tract and was referred to the cystoscopist the following day. In the meantime the original plates were studied and a consultation was held between the physician in charge, the röntgenologist, and the cystoscopist. This at times furnished the cystoscopist with much-needed information and established a new working basis for the röntgenologist should subsequent events indicate a second x-ray examination. The cystoscopist now made his thorough routine examination and he alone might clear up the diagnosis by one of his ingenious methods.

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# NOTES AND MISCELLANY.

## HELPING A CHILD THROUGH SCHOOL

Close application to school duties frequently lowers the health of a child and makes it an easy prey to prevalent winter infections. These may be largely avoided if the child be built up to the point where the normal powers of resistance will protect it from those diseases to which a weakened organism easily succumbs.

For this purpose nothing is the peer of Cordial of the Extract of Cod Liver Oil Compound (Hagee). Containing the active principles of sodium and calcium, it is a tissue food of the highest order and lends to the little student its contained nutritious elements. Given systematically to those children in need of such an agent, it will be found of decided advantage in helping them through school.

❁ ❁ ❁

## THE LATE DR. FRANK P. FOSTER, OF NEW YORK CITY.

In his "Reference Book of Practical Therapeutics," compiled by our old friend, the late Frank P. Foster, A. M., M. D., we note the following: "Antikamnia Tablets have been much used and with very favorable results in neuralgia, influenza and various nervous disorders. As an analgesic they are characterized by promptness of action, with the advantage also of being free from any depressing effect on the heart. As an antipyretic they act rather more slowly than antipyrine, but efficiently."

We are pleased at this expression of faith in the efficacy, promptness and absence of untoward after-effects of this most excellent remedy, and we feel that the statement applies not only to Antikamnia Tablets, but also to Antikamnia and Codeine Tablets.

❁ ❁ ❁

## DOUBLE ELIMINATION.

Where the body is saturated with the waste-products of metabolism it is an important part of good medical treatment that these useless, harmful substances be thoroughly eliminated. The urinary system is a channel of evacuation, as well as the intestinal tract, and to free the system of toxic waste-products through both these channels is a logical procedure.

Defective elimination readily becomes a chronic condition since the toxemic patient lacks that initiative which is necessary to active physical exercise. A rational therapeutic treatment must be instituted while proper hygienic conditions are being re-established. In these cases, Cystogen-Aperient performs a double service by stimulating to normal function, and by disinfecting the urinary and intestinal tracts; Cystogen-Aperient (granular effervescent salt) combines the tonic and laxative properties of sodium phosphate and tartrate with the urinary-antiseptic and solvent action of Cystogen ($C_6H_{12}N_4$).

❁ ❁ ❁

## A TIME AND TROUBLE SAVER.

At no time does the duty of a physician become more irksome than in winter when, called upon to leave a warm, comfortable bed to go out and face the chilly blasts of winter everything seems to go wrong and it is hard to respond to the call of duty without grumbling. How much harder though when the horse is unsharpened and unfit to travel on slippery streets, no blacksmith shops open and if they were, no time to go to them and an urgent call to be answered.

Then is when Neverslip Red Tip Horseshoe Calks prove their value. As shown by the diagram in the advertisement in the October number of the BRIEF, the horse can be made ready in twenty minutes and that worry at least is settled.

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Why add to your trouble? Why not sit down now and write The Neverslip Mfg. Co., New Brunswick, N. J., for Booklet "H" which will tell you all about Red Tip Calks and their uses.

❖ ❖ ❖

### THERAPEUTIC ACTIVITY PLUS PALATABILITY.

The popularity of a remedial agent that is therapeutically active and palatable, is assured, for beyond these qualities there is nothing to be sought. These are the features of Cordial of the Extract of Cod Liver Oil Compound (Hagee) that make it such a favorite with physicians.

As a reconstructive and tissue nutrient, it stands the most rigid clinical tests and the prescriber may feel sure that definite results will follow its administration. One of its fields of usefulness is in the protracted convalescence consequent upon a severe infection such as typhoid fever. Cord. Ext. Ol. Morrhuae Comp. (Hagee) stimulates the reconstructive functions and aids materially in hastening the return to health.

❖ ❖ ❖

### "ELIXIR SALOFORM COMP., FLEXNER."

Contains 20% Alcohol. An efficient remedy for Rheumatism, Gout, Cystitis and Uric Acid Solvent. Prepared for physicians' prescriptions only. Robinson-Pettet Co., incorporated. (See page 29 this issue.)

❖ ❖ ❖

### ANOGON.

Anogon is the mercuric salt of diiodo-paraphenol-sulphuric acid. It occurs in the form of sulphur yellow, microscopic crystals, containing 48.5% mercury and 30.7% of iodine. It is an antiseptic and antisyphilitic and is recommended for intramuscular injection in the form of a 10% oily suspension.

❖ ❖ ❖

### SCHOOLBOY "HOWLERS."

"Noah's wife," wrote one boy in a recent school examination in England, "was called Joan of Arc."

"Water," wrote another, "is composed of two gases, oxygen and cambridgen.'

"Lava," contributed a third youth, "is what the barber puts on your face."

"A blizzard," insisted a fourth, "is the inside of a fowl."

❖ ❖ ❖

### CLOUDY AMMONIA.

Mr. Henry Watters, of Ottawa, proposes the following formula for "cloudy ammonia," a preparation very popular for cleaning clothes, carpets, hair brushes and for general household use:

| | |
|---|---|
| Powdered borax | ¼ ounce |

Dissolve in

| | |
|---|---|
| Water | 6 ounces |

Add

| | |
|---|---|
| Ammonia 30% | 5 ounces |
| Then oleic acid | ¼ ounce |
| Cologne water | ½ ounce |

Previously mixed with

Or if preferred

| | |
|---|---|
| English soft soap | ½ ounce |
| Borax | ¼ ounce |
| Water | 6 ounces |

Rub together and add

| | |
|---|---|
| Ammonia 30% | 5 ounces |
| Cologne water | ½ ounce |

The Cologne Water is made from

| | |
|---|---|
| Oil of bergamot | 10 c.c. |
| Oil of orange, sweet | 10 c.c. |
| Oil of neroli | 2 c.c. |
| Oil of lemon | 2 c.c. |
| Deodorized alcohol | 1,000 c.c. |

With sufficient concentrated imported Orange Flower Water to cause slight opalescence.

After some days (the longer the better) filter.

❖ ❖ ❖

### BECK'S BISMUTH PASTE.

The *Prescriber* (Edinburgh) prints the following:

Paste No. 1 consists of:

| | |
|---|---|
| Bismuth subnitrate | 33 parts |
| Soft paraffin (yellow) | 67 parts |

Paste No. 2 consists of:

| | |
|---|---|
| Bismuth subnitrate | 30 parts |
| Soft paraffin (yellow) | 60 parts |
| White wax (M. P. 120° F.) | 5 parts |
| Hard paraffin | 5 parts |

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Written 12/23/11

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# The MEDICAL BRIEF

"Since brevity is the soul of wit,
And tediousness the limb and outward flourishes,
I will be BRIEF." —Shakespeare.

## DECEMBER, 1911


## New York Polyclinic Medical School and Hospital

**The First Post-Graduate Medical Organization in America.**
**Chartered by the University of the State of New York.**

**219 East Thirty-Fourth Street, - - NEW YORK CITY.**

## POST-GRADUATE COURSES FOR DOCTORS OF MEDICINE

Students may matriculate at any time during the year. The course of study may be general or confined to one or more special subjects.

**DEPARTMENTS:**

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| General, Orthopedic, Rectal, Genito-Urinary. | Clinical Medicine (including Physical Diagnosis), Digestive System, Children, Skin. |
| Gynecology, Obstetrics, Eye, Ear, Nose, Throat. | Nervous System, Electro-radiotherapy. |

**Operative Courses on the cadaver in all surgical departments.**
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**Physicians come in direct personal contact with abundant material for clinical instruction in both hospital and dispensary.**

Special courses, involving individual work, may be arranged for.
For further information, address

**JOHN A. WYETH, M.D., LL.D., President of the Faculty,**
*Or* **JOHN GUNN, Superintendent.**


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# Important Therapeutic Indications in Diseases of the Urinary Tract

Fulfilled by

# URIFORM

Highly recommended in the treatment of

**CHRONIC URETHRITIS** **VESICAL CATARRH**

**PROSTATITIS** **VESICULITIS**

**PYELITIS**

***BECAUSE:***

*It sterilizes the Urine* *Reduces Congestion*
*Arrests Discharge* *Allays Pain*

DOSE: One to two teaspoonfuls three times daily.

*Literature and Sample on request.*

**Schieffelin & Co.**
New York

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# THE PREST-O-LITE GAS TANK

## HAS TWO USES FOR DOCTORS

A Prest-O-Lite Gas Tank, on your automobile or carriage, floods the road far ahead with strong, steady, dependable light, turned on and off like a gas jet. Makes night riding safe. Both tank and lamp are easily detached from vehicle for use in sick-room emergencies. When empty, exchange the tank for a full one. This ready-to-use gas light costs about $6 per year. The tank itself costs $18, but it is always salable for about what you paid for it.

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Most of the leading automobiles are now regularly equipped, free, with Prest-O-Lite. Any maker, or dealer, ought to take off the treacherous, obsolete gas generator, and put on Prest-O-Lite instead, if you insist. And get the genuine—no imitation furnishes dependable exchange service.

**The Prest-O-Lite Company**

**250 E. South St.**
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# Ecthol.

No remedy yet introduced to the profession covers so large a field of usefulness as ECTHOL.

It is indicated in all breaking down tendencies of the fluids, tissues and corpuscles, as it antagonizes and corrects all gangrenous and malignant conditions.

Wherever there is dyscrasia of the secretions, or where blood poisoning or tissue disintegration exists, ECTHOL is the indicated remedy. In other words, it is anti-purulent.

It is, therefore, indicated in typhoid or other morbific fevers, erysipelas, diphtheria, carbuncles, boils, gangrenous wounds, ulcers, abscesses, and all other cachectic conditions of the system.

It is also the best remedy for the stings of insects, bites of snakes, for blotches, pimples, etc.

In addition to its internal administration, it should be freely and frequently applied to external sores of every description. It should also be used as a mouth wash and gargle in ulcerated or putrid conditions of the mouth and throat.

ECTHOL IS NEITHER ALTERATIVE NOR ANTISEPTIC in the sense in which those words are usually understood. It is anti-purulent, anti-morbific—A CORRECTOR OF THE DEPRAVED CONDITION OF THE FLUIDS AND TISSUES.

DIRECTIONS.

ECTHOL should be administered internally IN ALL CASES, in doses of one teaspoonful four times a day, or as often as every two hours in very bad cases, and when used for external ailments, it should ALSO be freely applied to the affected parts.

BATTLE & CO., Chemists, St. Louis:

I have used Ecthol in scrofulous ulcers, fungus excrescences, blotches and warts. Ecthol certainly does excel any remedy I have ever tried, and has given wonderful results in so short experience. I will continue to use it in my practice.

A. H. SHAEFFER, M. D.,
Circleville, Ohio.

# BATTLE & CO.

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Antiseptic

Antispasmodic

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## AS AN AID

TO THE

## MEDICAL PROFESSION

Is the one Great Tasteless, Odorless Petroleum Preparation for Internal use.

Indicated in Bronchial, Pulmonary and Catarrhal conditions, and the various diseases of the throat and lungs. Also for Asthmatic affections, wasting diseases, La Grippe, Coughs and Colds and general debility.

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A Dollar bottle will be sent to any physician on receipt of forty cents in postage stamps to pay express charges.

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It is particularly useful in the treatment of the very young.

Cresolene is indicated in Whooping Cough, Croup, Bronchitis, Asthma, Coughs and the bronchial complications incident to Scarlet Fever and Measles.

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# A DELIGHTFUL REVELATION

The value of senna as a laxative is well known to the medical profession, but to the physician accustomed to the ordinary senna preparations, the gentle yet efficient action of the pure laxative principles correctly obtained and scientifically combined with a pleasant aromatic syrup of California figs is a delightful revelation, and in order that the name of the laxative combination may be more fully descriptive of it, we have added to the name Syrup of Figs "and Elixir of Senna," so that its full title now is "Syrup of Figs and Elixir of Senna."

It is the same pleasant, gentle laxative, however, which for many years past physicians have entrusted to domestic use because of its non-irritant and non-debilitating character, its wide range of usefulness and its freedom from every objectionable quality. It is well and generally known that the component parts of Syrup of Figs and Elixir of Senna are as follows:

Syrup of California Figs.....75 parts

Aromatic Elixir of Senna, manufactured by our original method, known to the California Fig Syrup Co. only. .....25 parts

Its production satisfied the demand of the profession for an elegant pharmaceutical laxative of agreeable quality and high standard, and it is, therefore, a scientific accomplishment of value, as our method ensures that perfect purity and uniformity of product required by the careful physician. It is a laxative which physicians may sanction for family use because its constituents are known to the profession and the remedy itself proven to be prompt and reliable in its action, acceptable to the taste and never followed by the slightest debilitation.

## ITS ETHICAL CHARACTER

Syrup of Figs and Elixir of Senna is an ethical proprietary remedy and has been mentioned favorably, as a laxative, in the medical literature of the age, by some of the most eminent living authorities. The method of manufacture is known to us only, but we have always informed the profession fully as to its component parts. It is therefore not a secret remedy, and we make no empirical claims for it. The value of senna as a laxative is too well known to physicians to call for any special comment, but in this scientific age it is important to get it in its best and most acceptable form and of the choicest quality, which we are enabled to offer in Syrup of Figs and Elixir of Senna, as our facilities and equipment are exceptional and our best efforts devoted to the one purpose.

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DERMATONE

FORMERLY CALLED DERMOL

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### No. 49 ACNE TABLETS

FORMULA: Arsenicum Sulph. Rub. . . 1-100 gr. Nux Vomica . . . . . 1-20 gr.
Berberis Aq. Specific Tr. . . . . q. s. Echinacea Specific Tr. . q. s.

CHICAGO PHARMACAL CO. Charlestown, Mass., Oct. 5, 1908.

Enclosed is check for $4.00 for two dozen Dermatone. It is the best product I have ever seen for external use in acne. NELSON WOOD, M. D.

Dear Sirs:—Kindly send me one pound Dermatone. Has done wonders here this summer for freckles, and I expect to order more very soon. Yours very truly, A. J. FORGET, M. D., Los Angeles, Cal.

Gentlemen:—Enclosed please find check. Kindly sendly one pound (1 lb.) jar of "Dermatone." I have been getting excellent results from same. Very respectfully, DR. A. J. McINTOSH, Cleveland, O.

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**An ideal Purgative minus Cathartic Iniquities—A real advance in the therapy of Intestinal Constipation.**

Prunoids are highly recommended in obstipation, constipation and all conditions requiring a safe and effectual intestinal evacuant.

They do not cause undue peristalsis, nor will their use be followed by after-constipation.

DOSE: One to three Prunoids, as indicated.

**Sold only in boxes of 36 tablets.** **Sample and literature on application.**

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# SENG

**A Stimulator of Digestive Processes**

**Used alone or as a vehicle to augment and aid the natural functions of digestion.**

Seng has a digestive secernent action that can not be obtained through the use of its substitutes; therefore the physician should see that the genuine is dispensed.

DOSE: One to two teaspoonfuls.

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# Cactina Pillets

**Cercus Grandiflorus (*Mexicana*) in its most efficient form—A persuasive heart tonic to improve Cardiac Nutrition.**

The preparation of cactus is successfully employed in functional heart troubles such as tachycardia (tobacco heart), palpitation, feebleness, and to sustain the heart in chronic and febrile diseases. It is not cumulative in its action.

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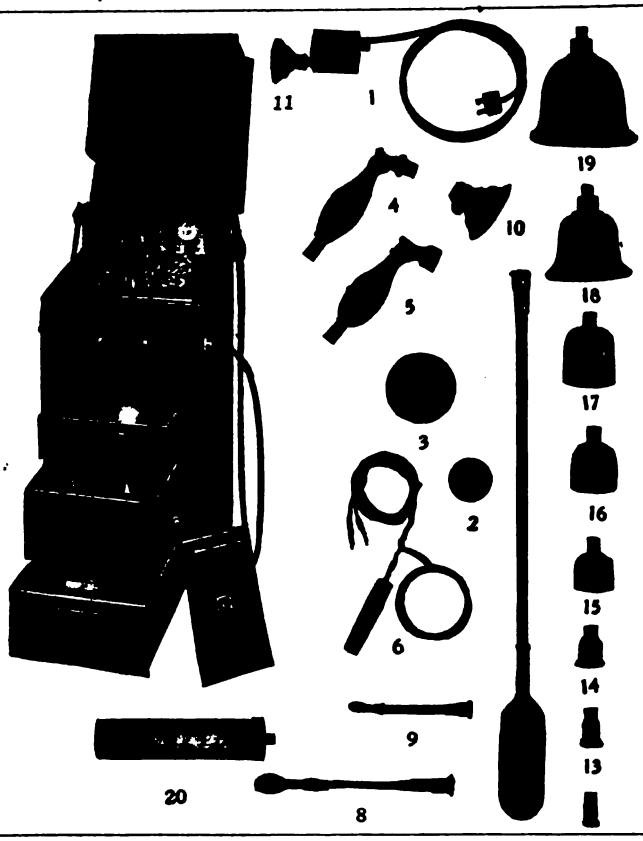


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Columbus, Ohio

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# I-Own-A

## Rheumatism and Kidney Remedy

FORMULA—Colchicum, Hyoscyamus, Rhus Tox., Chirette, Gaultheria, Potass. Iodide, Magendie's Sol. (1 min. in 10), Cactus Grand., Cannabis (½ min. Tr. in 10) Potass, Acet., Phytolacca.

DOSE—10 to 30 drops, in water.

INDICATIONS—Rheumatism, Neuralgia, Lumbago, Gout, Gravel, Stone and Kidney Troubles, and for Organic Disease of the Heart, especially Valvular disease.

We ask a trial of the I-Own-A Remedy at our expense, as we guarantee it to give marked relief within 2 to 6 hours from first dose, and particularly recommend it for chronic cases, as the more you use it, the better you become acquainted with it, the more highly you will think of it, the larger you will find to be the percentage of cases, all the requirements of which it will fully meet.

Left entirely in the hands of the profession, for prescription.

**Put up in only one style, without menstruum, at retail price of $1.00. Each bottle will make a 16-ounce bottle, with each teaspoonful containing 10 drops (not minims) of the I-Own-A Remedy proper.**

Professional testimonials, and samples sufficient to test it for two or three weeks, sent by mail to any PHYSICIAN upon direct request to

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℞: Pinus Can. (Ken.)

DARK WHITE

**Non-Alcoholic Mucous Astringent**

**IN GONORRHEA**
**Kennedy's Pinus Canadensis**

**IN LEUCORRHEA**
**Kennedy's Pinus Canadensis**

**IN VAGINITIS**
**Kennedy's Pinus Canadensis**

**FOR TAMPONING**
**Kennedy's Pinus Canadensis** (Dark)

Literature and Clinical Quantities upon Application.

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**FOR THE FUNCTIONAL WRONGS OF WOMEN**

# ALETRIS CORDIAL RIO

**POSSESSES REMARKABLE CURATIVE INFLUENCE**

It exerts its special tonic action on the whole uterine system, and it is therefore indicated in all abnormal conditions of the female system, without regard as to whether it is Dysmenorrhea, Menorrhagia, Leucorrhea, Amenorrhea, or any other functional wrong peculiar to the female.

Women suffering from Aching Back, Bearing-Down Abdominal Pains, or soreness in the Lumbar Region, should be given ALETRIS CORDIAL in teaspoonful doses—four or five times a day.

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# Micajah's Wafers

have unfailingly aided physicians in the treatment of the genital diseases of women. Whenever Leucorrhea, Gonorrhea, Vaginitis or Urethritis are present, or catarrhal, ulcerated or inflamed conditions exist in the uterine tract, **Micajah's Wafers** exert a prompt alleviative and healing influence peculiar to this simple but potent local remedy. Their gradual, continuous effect upon the mucous membrane is entirely beneficial, while their tonic properties are strengthening to a weakened organism. Local medication by **Micajah's Wafers** at once arrests the spread of disease, and in many cases effects a complete cure. Endorsed and used by physicians of all schools.

**Generous Trial Samples and Literature Free on Request**

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# FEBRILIN

A combination of tissue salts and glandular products for the cure of fevers. It has no reaction, does not affect the heart, and is safe in any dose. It is very effective in remittent and intermittent fevers, typhoid, malarial, hectic, pneumonia, and all diseases marked in the beginning by chill, fever, sweat. Hectic fever, during tuberculosis, marking suppurative processes, is easily controlled and suppuration ceases. Sold in ½-oz. vials, tablets, at $1.00 net. No samples.

**Ensign Remedies are biochemic, being composed of tissue salts and glandular products, and can be supplied for any form of disease. If you have cases which are troubling you write us.**

**ENSIGN REMEDIES COMPANY**
**DEP'T H**
**BATTLE CREEK, MICH.**

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A Vitalizing Tonic to the Reproductive System.

# SANMETTO

FOR

## GENITO-URINARY DISEASES

SPECIALLY VALUABLE IN

**Prostatic Troubles of Old Men—Pre-Senility,**
**Difficult Micturition—Urethral Inflammation,**
**Ovarian Pains—Irritable Bladder.**

SOOTHING—RELIEVING—RESTORING.

**POSITIVE MERIT AS A REBUILDER**

DOSE—One Teaspoonful four times a day.

☞ Beware of the so-called Elixir Compounds claiming to be "the same thing" or "just as good" if you do not wish to be disappointed.

**OD CHEM. CO., NEW YORK.**

# PRE-SENILITY.

**PRE-SENILITY** or premature old age, is a too early decline of the virile and physical powers, manifested by a commencing decadence of the reproductive glands—such as a wasting or atrophy of either the Prostate, Testes, Mammæ or Ovaries—caused by masturbation, sexual excesses, or sedentary habits.

**SANMETTO** is the indicated remedy, as it is unexcelled as a vitalizing tonic to the withered glands of the reproductive system, promoting their normal secretory activity. Its continued and regular use for some weeks produces results which are satisfactory to both physician and patient.

**SANMETTO** is a true TONIC, not a stimulant, to the reproductive organs and mucous surfaces, hence its use for a sufficient period restores their normal functions in many cases.

**OD CHEM. CO., NEW YORK.**

**NEURILLA** FOR NERVE DISORDERS **NEURILLA**

If Patient suffers from THE BLUES (Nerve Exhaustion), Nervous Insomnia, Nervous Headache, Irritability or General Nervousness, give four times a day one teaspoonful **NEURILLA**

In nervous fretfulness of teething Children give five to twenty drops.

DAD CHEMICAL COMPANY, NEW YORK AND PARIS

25 COMMERCE STREET.

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We have printed quite a handsome little booklet entitled "How to Become a Good Optician," that gives full particulars of our home-study course in Refraction for physicians.

It tells all about our college and methods and what we have accomplished in this field during the past sixteen years.

It tells why every physician should have a practical training in the correction of ocular disturbances and refractive errors.

Our course is not unreasonably expensive, but those who have taken it express surprise at the ground it covers and the clear and comprehensive manner in which it is written.

We will be pleased to send this booklet to any physician who will write us on his letterhead or enclose his professional card.

**The South Bend College of Optics**
(CHARTERED)
**No. 7 Kamm Building**
**South Bend, Indiana, U. S. A.**

## Soap and Water

THE use of soap and water is, and always has been, the universal method of obtaining bodily cleanliness. For this purpose, nothing equals it for **temporary** use, but this method acts mechanically only, and what soap and water do to clean the body of dirt and other accumulations,

## Tyree's Antiseptic Powder

does to relieve, cure, and clean diseased and infected conditions occasioned by thrush, prickly heat, perspiration, hives, restlessness, diarrhoea, scratches, burns, offensive odors, poison oak, insect bites, sunburn; tender, painful, perspiring feet, itching, and diseases of the genito-urinary organs. Tyree's Powder never irritates or damages. It is not a patent medicine, and its moderate cost does not oppose persons of limited means, using it. For general use, dissolve one or two teaspoonfuls in a pint of water, and use according to the directions contained in our little booklet, **The Nurse,** which accompanies each free sample and package. It is sold by all reliable druggists in two and eight ounce containers, at twenty-five cents and one dollar a box.

**J. S. TYREE, Chemist, Washington, D. C.**

K&O DOUCHE FOR THE APPLICATION OF GLYCO-THYMOLINE TO THE NASAL CAVITIES

# GLYCO-THYMOLINE FOR CATARRHAL CONDITIONS

Nasal, Throat
Intestinal
Stomach, Rectal
and Utero-Vaginal

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This preparation contains bromides salts of extraordinary purity and therefore should be specified by physicians who desire the best possible in

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In epilepsy and all cases demanding continuous bromide treatment it insures the maximum bromide results with the least danger of causing bromism, a result that can not be obtained through the use of substitutes.

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1-28 grain Strychnine to teaspoonful.

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In proper dilution, it may be freely and continuously used without prejudicial effect, either by injection or spray, in all the natural cavities of the body.

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even though the acute stage of pneumonia is weeks past, the patient has not yet reached the zone of safety, for in his convalescence, tissue weakness and loss of bodily vigor make him an easy prey to tuberculosis—the last pitfall of pneumonia. TO PROTECT THE CONVALESCENT—TO INCREASE HIS POWERS OF RESISTANCE—TO GUARD HIM FROM THIS PITFALL IS ONE OF THE GREAT PURPOSES OF

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PAUL AUERBACH: "Aus der Hautabteilung der Madgeburger Krankenanstalt" (Oberarst Dr. Schreiber). "Klin. Therap. Wochenschrift." 1909, No. 24.
Dr. H. REINHARDT: "Apotheker-Zeitung." 1909, page 90. See also "Vierteljahrschrift für pract. Pharmacie," 1908, Part 4, Page 311.
Dr. KURT FEIN (Rudolph Virchow Hospital, Berlin): "Die Therapie der Gegenwart," Part 3, March 1910.

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A powerful alterative and resolvent, glandular and hepatic stimulant, and succedaneum to the iodides. Indicated in all conditions dependent upon perverted tissue metabolism. Does not cause the unpleasant gastric symptoms of potassium iodide.

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*Nascent Chemic Union of Maizenic Acid—from Green Corn Silk—with Lithium forming Maizenate-Lithium. Two grains to dram. Dose, 1 to 2 drams. 8-oz. bottle, $1.00.*

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Pneumococcus 30,000,000 }
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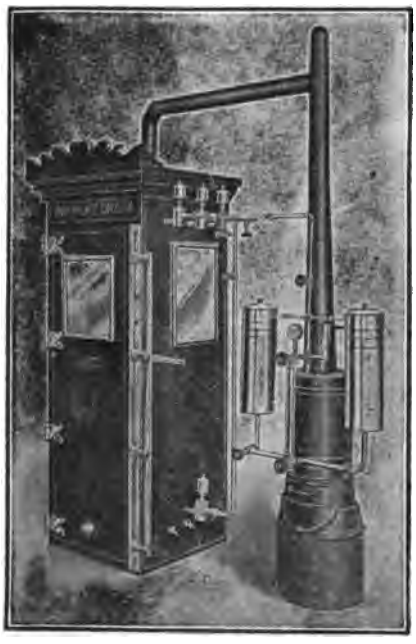

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The INHALATORIUM is specially designed for treating PULMONARY TUBERCULOSIS, BRONCHITIS, CATARRH, ASTHMA, HAY FEVER, and other diseases of the Air Passages. By the aid of an ingenious mechanical attachment various Chronic diseases not closely related to the above, including RHEUMATISM, SCIATICA, Skin and Blood Diseases, are also successfully treated.

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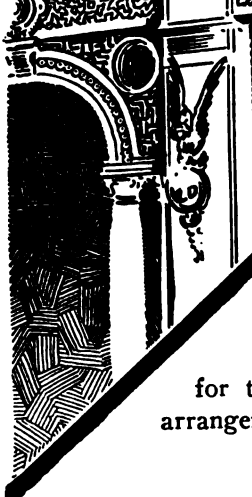

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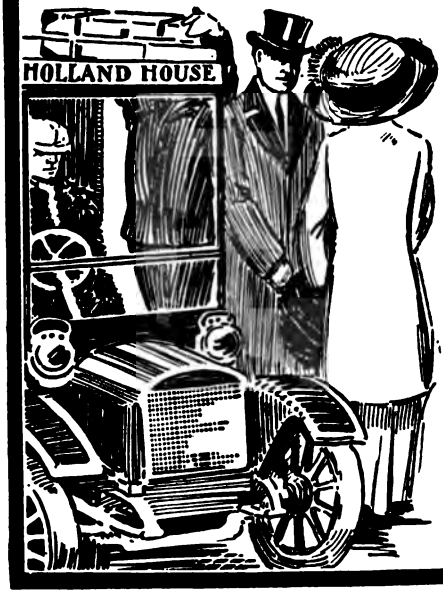


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the one efficient preparation of iron that acts as a genuine blood constructor, without, in the least, disturbing the digestive functions.

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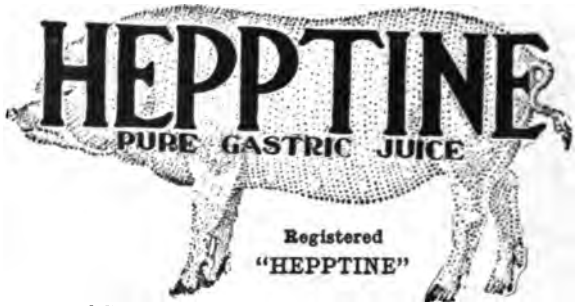
A Pure Physiologic Gastric Juice

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Dr. Hepp undertook the task of providing an adequate supply of this gastric juice in the proper condition for human consumption. In this he has succeeded and the remarkable success of French Specialists in the past three years in the correction of gastric disorders has been due to the use of this physiologic gastric juice from the Laboratories of Dr. Hepp. We have arranged for the importation of this product direct from Dr. Hepp's Laboratories in Paris and a stock is now on hand in New York, ready for your prescription.

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with its fermentation, nausea, pain, distress and other disagreeable symptoms, is rapidly and often permanently relieved by the use of

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### CHEWING GUM AS A MOUTH CLEANSER.

Le Grand Kerr, in *American Medicine,* points out that one of the most trying problems in the infectious diseases of children particularly, is the one of keeping the buccal cavity reasonably clean. No matter how conscientious the nurse may be in cleansing the mouth with the various antiseptic solutions, the work is never satisfactorily accomplished. However, the importance of a clean mouth in the limitation or preventing of unpleasant complications cannot be overestimated. Many of the secondary infections which occur as a result of infectious disease in childhood occur because the mouth has not been kept clean.

The child naturally rebels against the cleansing process while it is very ill and therefore, if some more attractive and efficient way can be found to accomplish the same result, we ought to take advantage of it. The use of chewing gum seems to offer the best relief. It is attractive to the child and through its use at stated intervals the little patient is led to effectively do two things that are most important in keeping the mouth and tongue clean: (1) a stimulation of the flow of saliva, and (2) the beneficial movement of the tongue, which is a most efficient cleanser through its mechanical action alone.

This method has been tried for months by the writer in cases of typhoid fever, scarlet fever, measles and diphtheria and always with beneficial results.

A fresh piece of gum must be used every time and the old piece destroyed. The use of the gum need not, however, result in the absolute discontinuance of the other methods of cleansing which are commonly in vogue. Its use certainly should not create a false sense of security because although highly effective in its results, there should be instituted the same care and thoroughness of examination of the buccal cavity in all of the infectious diseases of childhood and this examination should always be an important part of the routine examination. The chewing of gum is only one of many things that may be done to keep the buccal cavity reasonably clean, but the writer has found that it is a most important one and a pleasant one for the child.

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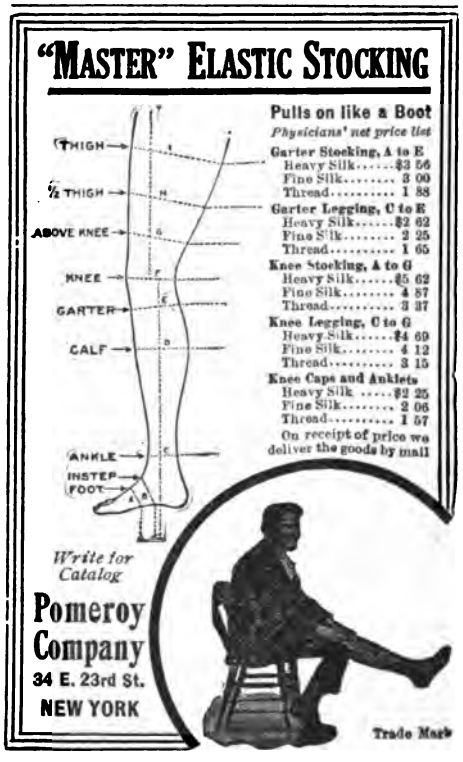



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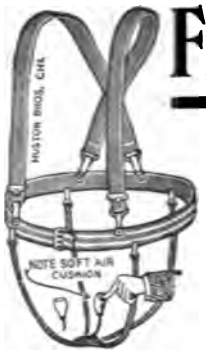

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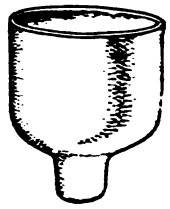

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VOL. XXXIX. No. 12. DECEMBER, 1911 WHOLE No. 468


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